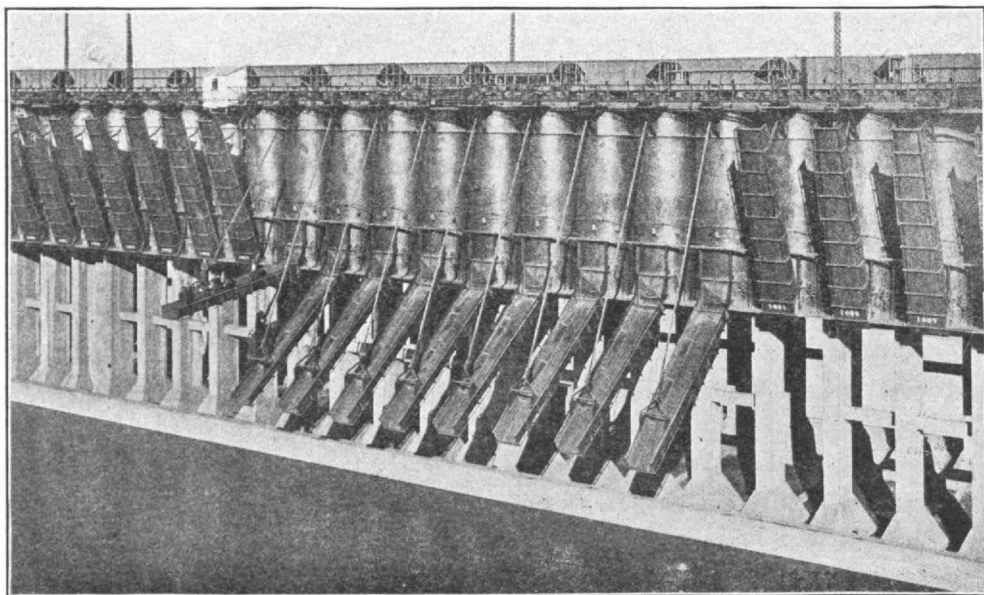


General View of the Great Northern Ore Dock at Allouez, Wis. From *Science Conspectus*



Side View of the Dock with Ore Cars on the Structure. From *Science Conspectus*

technology review

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The Technology Review

VOL. XIV.

JULY, 1912

No. 7

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OF THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

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EDWIN S. WEBSTER, '88.

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WALTER B. SNOW, '82.

EDWIN S. WEBSTER, '88.

A. F. BEMIS, '93.

A. A. NOYES, '86.

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CHARLES F. LAWTON, '77.

OAKES AMES, '85.

HARRY E. CLIFFORD, '86.

JOHN L. SHORTALL, '87.

SPAULDING BARTLETT, '90.

WILLIS R. WHITNEY, '90.

E. LAURENCE HURD, '95.

FRANKLIN T. MILLER, '95.

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'83, HORACE B. GALE.

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Massachusetts Institute of Technology, Boston.	152 West St., Worcester, Mass.
	RANDALL CREMER '12
	112 C St., S. E., Washington, D. C.

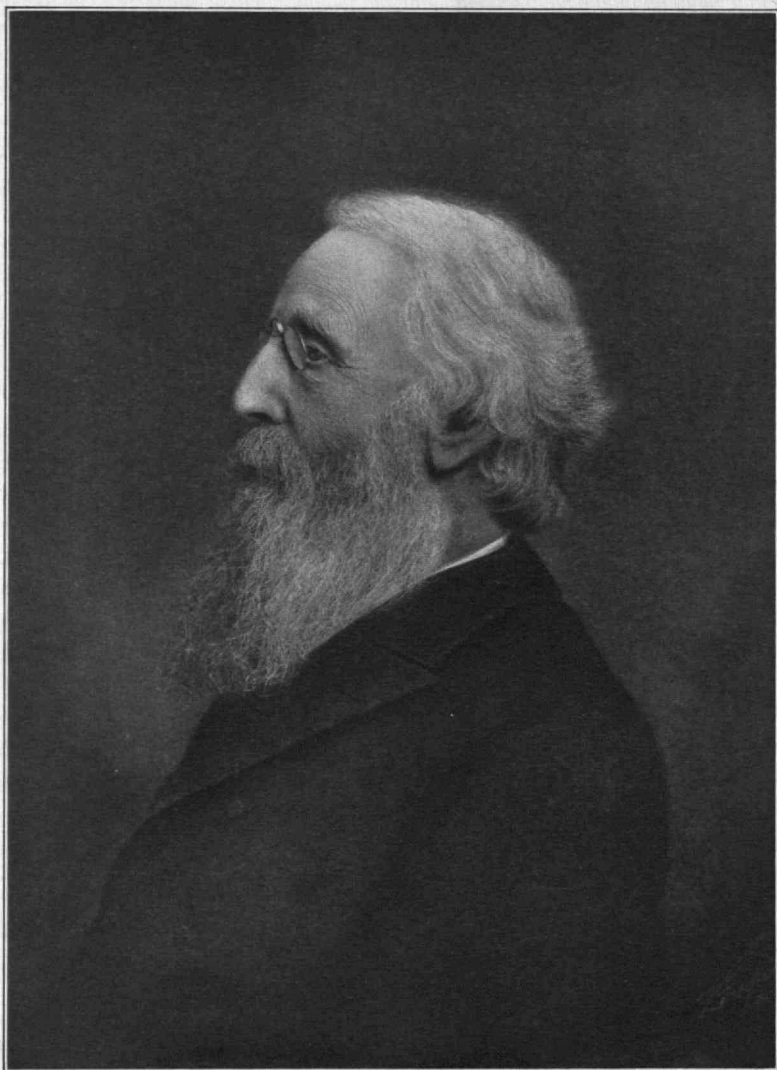
LOCAL ALUMNI ASSOCIATIONS

- Albany — TECHNOLOGY CLUB OF ALBANY, N. Y., Selby Haar ('04), Secretary, 12 Grove Place, Schenectady, N. Y.
- Birmingham — TECHNOLOGY ASSOCIATION OF GREATER BIRMINGHAM, ALA., Maurice Scharff ('09), Secretary, 1140 Brown-Marx Building, Birmingham, Ala.
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- ☞ Luncheon — The classes from '01 to '10 meet at the American House Rathskeller, Hanover Street, Fridays, 12.30 to 1.30 p. m.
- Brookline — BROOKLINE TECHNOLOGY ASSOCIATION, George Lawrence Smith ('97), Secretary, 36 Upland Road, Brookline, Mass.
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- ☞ Luncheon — Thursdays at 12.30 p. m. at Grand Pacific Hotel, 178 Madison Street.
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Lowell } Secretary, 67 Thorndyke Street, Lawrence, Mass.
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- Manchester — TECHNOLOGY ASSOCIATION OF NEW HAMPSHIRE, Andrew Fisher, Jr. ('05), Secretary-Treasurer, 186 Lowell Street, Manchester, N. H.
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- Minneapolis — TECHNOLOGY ASSOCIATION OF MINNESOTA, DeW. C. Ruff, ('07) Secretary, Manhattan Building, St. Paul, Minn.
- New Bedford — TECHNOLOGY CLUB OF NEW BEDFORD, MASS., Charles Frederic Wing, Jr. ('99), Secretary, 36 Purchase Street, New Bedford, Mass.

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- ☞ Luncheon — Third Tuesday of each month.
- Spokane — INLAND EMPIRE ASSOCIATION OF THE M. I. T., Philip F. Kennedy ('07), Secretary, 118 E. Mission Ave., Spokane, Wash.
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- Worcester — WORCESTER COUNTY TECHNOLOGY CLUB, Louis E. Vaughan ('02), Secretary-Treasurer, 72 West St., Worcester, Mass.

FIXED LUNCHEONS

- Boston — the '01-'10 Luncheon Club at American House Rathskeller, Fridays, 12.30-1.30 p. m.
- Birmingham — Technology Association of Greater Birmingham at the Womans' Exchange, Title Guarantee and Trust Bldg., Saturdays, at 1.00 p. m.
- Chicago — Northwestern Association of M. I. T., at Grand Pacific Hotel, Thursdays at 12.30 p. m.
- Cincinnati — Cincinnati M. I. T. Club at the Bismarck Grill, Walnut Street, Tuesdays, from 12-1.30 p. m.
- Los Angeles — Technology Club of Southern California, at the University on the first Wednesday of each month.
- Providence — Technology Club of Rhode Island, at the Blackstone Hotel, 317 Westminster Street, Thursdays at 12.30 p. m.
- Seattle — Technology Club of Puget Sound, third Tuesday of each month.



PRESIDENT JOHN D. RUNKLE

The Technology Review

VOL. XIV

JULY, 1912

No. 7

FOUR HUNDRED THOUSAND PLEDGED

Alumni Fund growing satisfactorily—The President depends on the Alumni to do their part—Be sure and subscribe something, even if it is small

It is a matter of much congratulation that the Alumni Fund, which was started April 9, had at the end of only three months reached the sum of nearly four hundred thousand dollars, this amount resulting almost entirely from circular letters sent out by the committee, the class and local chairmen. Furthermore this amount has been given by only 19 per cent. of the total number of men available. The actual figures of the fund at the end of the three months are: amount subscribed \$396,111.20 from 1762 men. The President, the Fund Committee, and all others who are interested in the Institute of Technology are tremendously encouraged at this excellent showing. During the summer the work will drop off to some extent, but it is hoped that another hundred thousand may be added before October, when the committee will take up the work vigorously and attempt to close up the fund in two or three months.

THE PRESIDENT DEPENDS ON THE ALUMNI

In his letter of March 20 to the former students of the Institute, President Maclaurin said: "In my conversation with him ("Mr. Smith") it was clearly understood that his gift should not be applied to the laying out of the grounds, the completion of the Walker Memorial, the erection of dormitories, the equipment of the buildings, the construction of conduits, drains and water

Class	Subscribers	Amount	(a) % of men subscribing	(b) % of amount subscribed	Class Standing		Total Points
					a	b	
'68	6	\$8075.00	27.3	83.4	2	3	5
'69	5	1710.00	22.7	18.1	14	28	42
'70	7	1000.00	23.7	6.96	10	42	52
'71	8	1110.00	14.3	5.82	37	43	80
'72	5	1700.00	17.2	14.7	28	31	59
'73	10	9550.00	21.3	52.2	21	10	31
'74	16	1280.00	25.4	5.35	3	44	47
'75	12	3405.00	15.6	12.	34	37	71
'76	16	21250.00	21.4	78.5	20	5	25
'77	12	2425.00	17.9	10.4	27	40	67
'78	10	12475.00	22.2	81.5	17	4	21
'79	15	4510.00	22.7	20.7	15	23	38
'80	4	3750.00	14.3	41.8	38	11	49
'81	25	11740.00	41.7	62.8	1	8	9
'82	5	2300.00	8.63	13.2	44	36	80
'83	9	3300.00	16.4	20.7	32	24	56
'84	15	3895.00	19.2	17.9	23	29	52
'85	22	23600.00	24.4	97.2	6	2	8
'86	15	2425.00	15.2	9.46	35	41	76
'87	18	6675.00	11.1	16.5	43	30	73
'88	42	65565.00	24.9	162.	5	1	6
'89	42	13400.00	24.1	32.7	7	13	20
'90	41	23264.00	22.8	58.5	12	9	21
'91	43	10046.00	23.9	26.5	8	16	24
'92	25	5820.00	11.6	13.5	42	35	77
'93	57	39980.00	19.	70.	24	7	31
'94	36	11295.00	23.9	23.3	9	17	26
'95	42	9105.00	18.	22.8	25	18	43
'96	52	10035.00	16.6	20.	31	26	57
'97	44	5665.00	17.1	14.6	29	32	61
'98	43	10020.00	12.6	20.9	39	22	61
'99	46	4380.00	16.4	12.	33	38	71
'00	36	4120.00	11.8	11.2	41	39	80
'01	48	4835.00	15.2	13.9	36	33	69
'02	39	4357.00	12.3	13.9	40	34	74
'03	69	5692.00	21.8	20.1	18	25	43
'04	65	6185.00	16.7	19.8	30	27	57
'05	114	7667.00	22.7	21.8	16	21	37
'06	94	6435.00	19.7	22.5	22	19	41
'07	103	4792.00	23.6	21.9	11	20	31
'08	101	5835.00	21.6	31.2	19	15	34
'09	109	4490.00	22.8	31.4	13	14	27
'10	120	3770.00	25.3	39.7	4	12	16
'11	114	2633.00	18.	78.4	26	6	32

How the classes stand at the end of 11 weeks.

mains, and provision for proper facilities for athletics." He further says: "I assured the donor that the alumni would gladly take a hand in this portion of our program and they could be relied upon to show their appreciation of his gift by finishing the work so well begun by him."

When it is to be considered that every dollar thus far given to the Institute has been given for a specific purpose other than the above, it seems unnecessary to urge generous contributions from the alumni of the Institute, for if sufficient money is not forthcoming the part which has been assigned to them will be but imperfectly carried out. That they can raise this is shown by the amount and character of the fund today.

STANDING OF CLASSES AND ALUMNI CENTERS

In the tables which accompany this article it will be seen that the standing of the classes as well as the geographical centers depend on two factors: one the proportion of men subscribing, and the other the proportion of the assessed amount subscribed. The amount assessed against the class is an arbitrary one, based on \$10 a year for every year since the class was graduated. The numerical standing of the class in accordance with the first item is noted and then similar comparisons are made with regard to the amount of the assessment subscribed. If the class stood eighth in number of men and sixth in amount of assessment subscribed, the number of points credited to the class would be the sum of these two, or 14. When these points have been determined the classes are then rearranged in order of merit, the class having the smallest number of points being number one. It will be seen from the above that the number of givers counts just as much in favor of the class as the amount of money subscribed. There are hundreds of men very much interested in the Institute who are unable to give large amounts; there are many men who do not feel that they can give anything. Please remember that no matter how small the amount, it is credited to the class and helps it to take a creditable standing among the others. The classes in the order of merit at the end of three months are as follows:—

CLASS POINTS			CLASS POINTS			CLASS POINTS		
1.	'68	5	16.	'11	32	31.	'72	59
2.	'88	6	17.	'08	34	32.	'97	61
3.	'85	8	18.	'05	37	33.	'98	61
4.	'81	9	19.	'79	38	34.	'77	67
5.	'10	16	20.	'06	41	35.	'01	69
6.	'89	20	21.	'69	42	36.	'75	71
7.	'78	21	22.	'95	43	37.	'99	71
8.	'90	21	23.	'03	43	38.	'87	73
9.	'91	24	24.	'74	47	39.	'02	74
10.	'76	25	25.	'80	49	40.	'86	76
11.	'94	26	26.	'70	52	41.	'92	77
12.	'09	27	27.	'84	52	42.	'71	80
13.	'73	28	28.	'83	56	43.	'82	80
14.	'93	31	29.	'96	57	44.	'00	80
15.	'07	32	30.	'04	57			

The geographical centers in the order of merit are as follows:—

POINTS		POINTS	
1. Cuba.....	4	29. Tacoma.....	56
2. Canal Zone.....	7	30. Savannah.....	57
3. Akron.....	8	31. Japan.....	58
4. Buffalo.....	11	32. Texas.....	60
5. Cleveland.....	12	33. Massachusetts Misc. .	61
6. Hawaii.....	13	34. San Francisco.....	64
7. St. Louis.....	18	35. Washington, D. C....	67
8. Syracuse.....	20	36. Canada.....	68
9. Boston.....	25	37. Springfield.....	69
10. Chicago.....	25	38. Worcester.....	70
11. Schenectady.....	27	39. Cincinnati.....	72
12. Minneapolis.....	28	40. Kansas City.....	72
13. Indianapolis.....	35	41. Steelton.....	72
14. Milwaukee.....	35	42. Baltimore.....	78
15. Portland, Ore.....	41	43. New Hampshire.....	78
16. Providence.....	41	44. Atlanta.....	83
17. Connecticut.....	43	45. Fall River.....	85
18. Rochester.....	44	46. Mexico.....	87
19. Pittsburgh.....	45	47. Lowell.....	88
20. New York City.....	47	48. New Bedford.....	88
21. Spokane.....	48	49. Denver.....	92
22. Los Angeles.....	49	50. Seattle.....	93
23. Wilmington.....	51	51. Manila.....	96
24. Tennessee.....	52	52. Columbus, Ohio.....	99
25. Philadelphia.....	54	53. Pittsfield, Mass.....	99
26. Birmingham.....	55	54. Foreign Misc.....	107
27. Detroit.....	55	55. Vermont.....	110
28. Maine.....	56		

The following table shows the status of the various geographical centers—

District	Subscribers	Amount	(a) % of men subscribing	(b) % of amount subscribed	Standing	
					a	b
Akron, Ohio.....	25	\$2280.	61.	58.9	1	7
Atlanta.....	5	245.	18.5	7.68	32	51
Baltimore, Md.....	16	1200.	18.4	10.8	33	45
Birmingham, Ala.....	7	1000.	17.5	24.1	35	20
Buffalo, N. Y.....	26	7505.	29.5	74.3	5	6
Boston, City of.....	262	177150.	21.6	80.8	20	5
Canal Zone.....	3	525.	42.8	87.5	3	4
Chicago, Ill.....	95	13680.	28.1	25.4	7	18
Cincinnati, Ohio.....	14	2205.	15.7	17.2	40	32
Cleveland, Ohio.....	34	6785.	30.1	43.5	4	8
Columbus, Ohio.....	5	400.	12.8	7.77	49	50
Connecticut (State)....	44	4445.	23.2	19.9	18	25
Cuba.....	8	1875.	44.4	119.	2	2
Denver, Colo.....	20	1350.	15.3	8.77	43	49
Detroit, Mich.....	21	3050.	18.6	21.	31	24
Fall River, Mass.....	5	1625.	9.26	17.	52	33
Hawaii.....	4	2760.	25.	113.	12	3
Indianapolis, Ind.....	11	2500.	20.4	37.4	26	9
Japan.....	2	550.	15.4	26.7	42	16
Kansas City, Mo.....	12	1004.	19.7	12.9	23	44
Los Angeles, Calif.....	19	5730.	17.1	35.	38	11
Lowell, Mass.....	43	6264.	13.5	13.9	47	41
Maine, State of.....	30	2670.	24.6	15.	16	40
Manila, P. I.....	2	300.	8.	13.9	54	42
Massachusetts, Misc....	262	43353.30	17.	23.	39	22
Milwaukee, Wis.....	13	2470.	21.3	28.9	22	13
Minneapolis, Minn....	25	3560.	25.	26.8	13	15
New Bedford, Mass....	17	1205.	17.4	7.5	36	52
New Hampshire (State)..	17	2670.	14.8	16.7	44	34
New York City.....	213	31933.	20.8	22.2	24	23
Philadelphia, Pa.....	41	4690.	21.3	17.5	23	31
Pittsburgh, Pa.....	40	4675.	22.5	19.9	19	26
Pittsfield, Mass.....	7	465.	14.	6.22	46	53
Portland, Ore.....	13	1230.	25.	19.4	14	27
Providence, R. I.....	42	3975.	25.1	17.8	11	30
Rochester, N. Y.....	11	1635.	20.	26.3	27	17
San Francisco, Calif....	31	3005.	20.8	15.1	25	39
Savannah, Ga.....	10	1620.	19.2	18.9	29	28
Schenectady, N. Y.....	32	3482.	27.8	24.7	8	19
Seattle, Wash.....	9	685.	14.7	9.48	45	48

District	Subscribers	Amount	(a) % of men subscribing	(b) % of amount subscribed	Standing	
					a	b
Steelton, Pa.....	9	985.	17.3	16.7	37	35
St. Louis, Mo.....	21	2870.	28.8	31.7	6	12
Spokane, Wash.....	16	2810.	18.4	27.	34	14
Springfield, Mass.....	14	3565.	13.5	23.6	48	21
Syracuse, N. Y.....	17	2485.	25.8	36.8	10	10
Tacoma, Wash.....	5	295.	26.3	10.1	9	47
Tennessee & Ky.....	12	975.	25.	15.7	15	37
Texas, Louisiana & ..						
Oklahoma.....	23	1220.	24.	13.6	17	43
Vermont (State).....	3	250.	7.9	4.35	55	55
Washington, D. C.....	53	3202.	21.4	10.3	21	46
Wilmington, Del.....	3	6470.	11.5	168.	50	1
Worcester, Mass.....	28	4730.	15.5	18.9	41	29
Canada.....	24	2280.	18.6	15.5	30	38
Mexico.....	7	1200.	10.	15.9	51	36
Foreign.....	11	851.85	8.1	5.53	53	54

President Maclaurin Sails for Europe

Sailing on the Arabic for a vacation in Europe was President Maclaurin, his wife and their son, Master William R. Maclaurin. President Maclaurin told the newspaper reporters that the land on which the new Technology will be built in Cambridge has already been bought and paid for.

"More than \$750,000 for this purpose was raised through subscription by friends and alumni," said President Maclaurin. "When I arrive home in September the architects will be called together and work started as soon as possible. We hope to have the new buildings ready for occupancy at the opening of the school year in 1915."

President Maclaurin said that while his tour through Europe was primarily one for pleasure, he expected to visit many of the famous European universities, among them the Imperial Institute of Technology in London, the Universities of Manchester and Burlingham, and the Dresden Technology College in Dresden, Germany. He added that Russia might be included in his itinerary if he had the necessary time.

THE WALKER MEMORIAL

Report of the work of the Committee showing the plan and scope of its work—All suggestions will be welcome

The April REVIEW announced renewed activity in regard to the Walker Memorial and the appointment of Messrs. Bemis, Burton, Noyes, Rockwell and Tyler (chairman) as a committee to work out a program. It may be well to present through the REVIEW at this time, the new committee's conception of its problem, and its present judgment as to the solution.

THE PROBLEM. What are the social and physical needs of our students and how shall they be met? Of our 1500 undergraduates, approximately 600 live at home, 400 in fraternity houses, 500 in boarding houses. Those who live at home are in general fortunate as to the essentials of living, but many of them live so far away that they lose much time in transit; many have little or no social contact with their fellows. They are not learning how to coöperate, how to receive and exert influence on others. Their education, good as it is for individual efficiency, needs to be broadened and socialized. To accomplish this without necessarily sacrificing the economic advantage of living at home must be one main aim of the Walker Memorial.

The fraternity 400 have at the best a social relation of great charm and high value. Is it not possible to make the best elements of this relation accessible to a much larger number of students, and at the same time to expand the limited socialization within the fraternity group, by developing a broader relationship—more democratic if less intimate—into which all Tech men shall enter on a common basis of loyalty to common ideals?

The boarding student *may* be well situated as to quarters, table and friends. It is to be feared that there are far too many exceptions, students who from financial stress, inexperience, or misfortune, are subject to hardships of all sorts and degrees. For these in particular new dormitories should provide.

But mere subsistence, however necessary, however favorable,

is not social education, it is only an important prerequisite. We must consider positive agencies. Young men are not by nature unsocial, self-seeking individualists; they are naturally addicted to discussion, controversy, coöperation. The instinct for teamwork has, however, been far too often perverted or atrophied by imperfect school conditions, so that self-consciousness must be overcome, a social consciousness created. The injunction "Do it yourself" may be followed too far. The average Tech man needs to realize that intense concentration, however valuable for solving mathematical problems, is not the key to all locks, that he must learn how to get inside the other fellow's mind, how to persuade, convince, lead. Something of this can be infused into the formal curriculum. Far more must depend on student initiative and activities. Such activities exist now in ample number, the four classes, the Institute committee, the departmental societies, the publications, *Tech* and *Technique*, the Christian Association, the Walker Club, the Show, the musical clubs and the various more specialized organizations. Most of these, possibly all, are good. No student's education is what it should be without such training as is afforded by public-spirited participation in some of them. To unite the many small efforts of individuals into a powerful resultant force is an achievement worthy of the man of exceptional administrative talent. One's own share in these activities—with the help of the point system perhaps—and its performance with such skill and judgment that studies shall not suffer, form a fine exercise in self-estimate and self-control.

Some of the activities should appeal not merely to the local and immediate public spirit of the student body, but to the analogous broader sentiments of civic patriotism and general altruism. Strong tendencies of the present age make for the unsettlement of long-established standards, and for the gradual or rapid transfer of political and economic power to classes which have heretofore exercised but little. In the resulting conflicts between great social forces, it is vitally important that the competent trained man on whom society more and more depends should be superior to narrow limitations of every sort, and should appreciate the whole problem as one of social justice and human welfare. Such participation in social service as may be practicable for students, particularly during vacation, should be encouraged.

Aesthetic and artistic elements are at present notably deficient

in the Tech man's education. It is given to few to produce—or even to reproduce—works of art, but some measure of appreciation should be for all, and a little actual participation is the best basis for true appreciation. Formal instruction is not to be thought of, but a favorable environment will do much. The Walker Memorial must inspire respect in its architectural dignity; it must unobtrusively familiarize its members with the world's masterpieces of painting, sculpture and music. Dramatic and musical clubs must be encouraged without too much emphasis on standards of excellence not attainable without sacrificing larger interests.

On the physical side "*Mens sana in corpore sano*" is a motto not remote from the "*Mens et manus*" of our seal. No man can reach his highest level as a student, an engineer, or a man, unless he learns and obeys hygienic laws of eating and drinking, bathing, clothing, exercise and clean living. Some must atone for past mistakes by corrective measures. Here lectures on hygiene, medical and physical examinations, required gymnastic exercises have their natural place. To normal young men competitive athletic sports afford the keenest enjoyment, constituting an immense and most popular field for recreation and self-expression. Under the direction of the Alumni Advisory Council, Tech athletics have been well and sanely developed, and the familiar grotesque excesses of intercollegiate football and the like, avoided. The present athletic field is too remote, however, and the number of students who participate, much too small.

Such is our conception of the main features and data of our problem.

THE SOLUTION. In meeting the needs thus sketched, our general aim must be to foster in every way a broadly democratic spirit of collective loyalty—not abstract idealism, not "college spirit" merely—but Tech spirit. The Institute must remain ever "a place for men to work"; it must become more and more a place for men to rise to higher levels, by combining with their work, social, aesthetic and physical activity and recreation,—learning not merely professions but service and the noble art of living. As our predecessors have had an honorable part in working out new methods and standards of training in applied science, so it is the privilege of ourselves and our successors to develop ideals of a new liberal education which, based on applied science, shall provide for the whole man. Details cannot yet be given, but the following

general outline expresses the best present judgment of the committee.

Besides buildings for administration, education, and research, the New Technology should include: a gymnasium, an athletic field, a swimming pool, a boat house; student houses or dormitories, a general commons, and an infirmary; the Walker Memorial related to all of these.

The gymnasium should be located and conducted with reference to two primary functions—the physical testing and training of the younger students, and the development—in connection with the field, the pool and the river—of outdoor athletics among the students generally. It should have a ground area of not less than 15,000 square feet. This, or the dining-hall, would serve for large dinners, dances, mass-meetings, etc.

The Walker Memorial, primarily a student “union,” should be of dignified and handsome architecture, prominently and accessibly located, within easy reach of the educational buildings, but not surrounded by them. It should contain a fine entrance hall and staircase, with pictures and statuary, settles and great fire-places. This would be the general meeting place of students, and here, on occasion, receptions would be held. There should be a reading-room and library, with abundant periodicals, and the literature of recreation, athletics, mountaineering and travel. An auditorium should be provided for concerts, dramatics and popular lectures. There should be an attractive dining-room, large enough for society dinners, but used habitually as a *table d’hôte* restaurant of somewhat better style than would naturally be found in the general commons.

Provision should be made for a variety of indoor athletic exercises, with rooms for handball, fencing, boxing, and perhaps bowling and billiards, with dressing-rooms, lockers and shower-baths. Recreation rooms, and numerous offices and meeting rooms for societies and student activities would complete the building.

The Walker Memorial would be organized as a student club, with a nominal membership fee. Practically all undergraduates should be members, and there should be provision for associate membership of alumni and instructing staff, whose mingling with the undergraduates it would be important to facilitate. It would be a centre for all those varied interests in which the students take free initiative individually or in groups.

It would be premature to discuss questions of location or architectural grouping, nor is it within the scope of the present paper to consider student housing and subsistence, a subject assigned to a special committee of alumni. A word may, however, be added on the further plans of the present committee, particularly as we desire and invite suggestions from readers of the REVIEW. The summer will be devoted to more detailed studies of special subsidiary problems. Thus, Dr. Rockwell, with his associates of the Advisory Council on Athletics, and Mr. Kanaly, will work out a program for the gymnasium, the field, the pool, and the athletic features of the Walker Memorial. Professors Talbot and Doten, with others, will study the question of incidental provision for members of the staff, and the difficult problems of the dining-room. A committee of undergraduates will work out a schedule of the needs of the student activities. Provisions of similar character at other institutions will be carefully studied with reference to their actual efficiency from the undergraduate standpoint. Correspondence is in progress with alumni in other parts of the country.

On the financial questions underlying this large program we have not entered. It has seemed to us best to proceed thus far on the assumption that whatever the Institute ought to have for this excellent purpose will be provided, even if this should mean several times the present amount of our fund.

We have to deal with an exceedingly difficult and complicated group of problems. The opportunity carries with it in a measure its own inspiration. Willing coöperation is rendered by all on whom we call. Making haste slowly, we are not without hope of arriving at a result worthy of the New Technology and of the great President whom we commemorate.

H. W. TYLER, '84.

Testimonial to Secretary Collins, '97

The recent reunion of the class of '97 at Osterville was made the occasion of the presentation of a beautiful silver plate to secretary John A. Collins, who, for fifteen years, has served faithfully and well as secretary of the class. The love and esteem with which the secretary is held by the class is not measured by the gift, for he has endeared himself to every member and through him the class has been held together since graduation.

STUDENT HOUSES

Committee outlines its work and asks for suggestions whether based on experience or not—An unusual opportunity presented

The Alumni Association Council has appointed a committee on student houses, to consider student dormitories and dining-halls on the new site and to make a report in the fall. The Corporation of the Institute of Technology through the President, Dr. MacLaurin, has expressed a desire to place the study of this important feature of the new Technology in the hands of the Alumni Association.

The committee, Messrs. Bemis, Allen, Eaton, Locke, and Bourne, have been working in conjunction with the Walker Memorial Committee. Lists of questions that have been sent out among students, alumni, and to other institutions, have sought information equally valuable to both committees for answering the needs of students who will live on the grounds.

A student-house, it is universally agreed, must not depart from the democratic character of the Institute, nor from the early standard, expressed by General Walker, that it "is a place for men to work, not for boys to play." The necessary opportunities for relaxation, and also for getting together or in touch with outside interests, must be provided in order to attain the highest type of work, and freedom from disturbance must be given during working periods,—proper places to study as well as to sleep and eat.

The character of the commons should be such that they shall seem desirable to every student, and yet they should provide accommodations so inexpensive that the most impecunious student cannot afford to room and board outside.

Fraternities may have their own houses or own entries and rooms on the campus; they are seeking, while preserving their own club or family relationship, to bring their members into closer touch with all the other students, including other fraternities. It is likely that this object will be attained by having the

chapter-members either room in an Institute "yard" or "quadrangle" or board in the commons, for the first two years.

The dormitories will probably each provide for from 50 to 100 students and one or two instructors, divided into "entries" or "staircases," serving 15 to 30 men. The unit will be one study to two bedrooms, but occasionally there will be one study to three bedrooms, study and bedroom, and single rooms. The total accommodations required will be for 600 men, including about 300 in fraternities and for possible immediate enlargement to 1000.

The commons may have to accommodate all the 1500 students and others at lunch. The accommodations at other meals will correspond to the rooms. A large dining-hall is called for with alcoves or small rooms for special needs. Beside the *table d'hôte*, there will be *à-la-carte* or restaurant service, and a lunch-room.

A recent graduate is gathering detailed information at other colleges, and the committee will welcome other material which may be forwarded to the secretary of the Alumni Association at the Institute.

Opinions based on the results of experience are wanted, but the possibility of a novel and original scheme must not be overlooked, for unique and ideal must be the first dormitory and dining-hall of the Massachusetts Institute of Technology.

Following are questions raised in regard to the possible arrangement and administration of dormitories and dining-halls noted by the Alumni Committee on Student Houses: the questions and notes are divided as:

- I. Social features.
- II. Fraternity relations.
- III. Suggestions for arrangement and construction.

SOCIAL OR ADMINISTRATIVE FEATURES

1. Should dormitories be large, accommodating perhaps 100 or more students, or smaller, accommodating 25 to 30 and providing more of the family or home atmosphere?

2. If of the smaller type, should they be individual buildings, or, for greater economy, and possibly for architectural effect, united in groups of four or six under one roof, with complete architectural cut-offs between the several sections?

3. Should the dormitories contain only sleeping-rooms, or should there be in each some sort of living-room or common meeting-room, providing for something of social life distinct from the social features of the Walker Memorial or other common meeting place?

4. Is it desirable to use every endeavor to place all the students on the same social footing, or is it wise in the dormitory accommodations to provide for the varying grades of personal convenience to which men from different homes have been accustomed?

5. If fraternity life in the dormitories is permitted, is it not all the more desirable, and perhaps essential that the general dormitory life should be made absolutely democratic, with no distinction between accommodations as regards attractiveness, convenience, and price?

6. In allotment of students to rooms, what should be the relations between classes?

7. Is it practical to take into consideration common tastes or personal congeniality?

8. Should there be definite requirements as to the ratio of men in various classes to be grouped in a dormitory?

9. Information as to control of dormitories, forms of student government, or faculty supervision.

10. Should there be a common dining-room, or dining-rooms in each of the dormitories carrying out still further the idea of home life?

11. Figures in regard to relative cost of operation of large dining-room, as against the smaller rooms.

12. Information desired as regards operation of smaller rooms with a central kitchen and supply, as against their operation with individual kitchen and supply.

13. Information desired as to the practicability of arranging for perhaps three grades of service, in connection with the large dining-room or commons, to meet the varying requirements as regards cost:

1. Cafeteria, or lunch-room at minimum cost.

2. Table d'hôte, at moderate cost with simple service.

3. À la carte, providing a greater variety and more elaborate service.

QUESTIONS ON FRATERNITY RELATIONS ASKED OF OTHER
COLLEGES

1. What is the approximate enrollment of your college?
2. Are fraternities, local and national, encouraged or discouraged by the faculty and corporation, or is the attitude of the faculty and corporation neutral?
3. What percentage of the student body are fraternity men?
4. Do your fraternities occupy houses on the campus, or constitute a part of the general dormitory system, or do they occupy houses apart from the general dormitory system?
5. Do the members of the fraternities eat in their houses, or do they eat in the general commons dining-room provided by the college?
6. Are members of all classes allowed to live in fraternity houses, or is it restricted to certain classes?
7. Do the fraternities in your college own their own houses, or do they lease them from parties entirely outside the college?
8. Does a representative of the faculty or the corporation have any jurisdiction over the affairs of the different fraternities?
9. Is the general standing of the fraternity men in your college the same as, higher than, or lower than the average of the remaining men from standpoint of: (a) Proficiency in studies; (b) Morals; (c) General desirability?
10. Is there any definite association in your college which provides for a general association between (a) the members of the different fraternities; (b) members of the fraternities and other students; (c) members of fraternities and the faculty?
11. Do the faculty and corporation of your college tend toward the plan of large dormitories, or do they seek to house students in smaller single houses containing groups of approximately twenty men?
12. Do the fraternities tend to encourage undesirable social distinctions, or merely provide for such as are inevitable?

SUGGESTIONS FOR ARRANGEMENT AND CONSTRUCTION

1. The accommodations required will be for not less than three hundred (300) at first with an additional 300 if the fraternities are included. Space should be provided for a possible increase to 1000. Accommodations should not be too large at first so as to

remain unoccupied or seem to be undesirable to the students, nor, on the other hand, should so small provision be made that mushroom lodging-houses will spring up in the neighborhood of the new site.

2. Provide for small groups, 15 to 50, perhaps, around the different stair-cases.

3. Study the relation of dormitories and dining-hall to the students' center, the "Walker Memorial."

4. Determine for the dormitories the ideal unit, which will probably be three-room for two students—study and two bedrooms. There will also be required single rooms, and study with one and three bedrooms. In rare cases, study, bedroom, bath may be provided. Lavatories including shower-baths, will doubtless be sufficient if provided on practically every floor. Southeast exposure for the chambers is desirable.

5. Dining-rooms: A dining-hall seating 200 or more, with alcoves or accommodation for small groups of students, would be the central feature of a group of lunch-rooms and a-la-carte restaurants with capacity for caring for the daily attendance at the Institute; these will be served from a single kitchen which would serve also the restaurant in connection with the Walker Memorial Building.

6. Common rooms: The size and number of these will depend largely on what is finally determined for the Walker Memorial Building, and also for lounging rooms or extra space in connection with the dining-halls. Liberal and inviting entrance-halls with fireplaces and window-seats on the stair-landings are details that have been proposed to answer this need.

7. An infirmary or emergency room should be provided.

8. Instructor's, monitor's or proctor's accommodations will be considered.

9. Data on dimensions of rooms are being obtained. For example: the minimum bed-room may be $6\frac{1}{2} \times 10$ –65 square feet; the number of shower-baths, 1 for every 10 students; the number of bath-tubs, 1 for every 15 students; dining-rooms, 10 square feet per student (minimum); buildings, 3 or 4 stories high. These items are subject to discussion and verification.

FRANK A. BOURNE, '95,

Secretary of Committee on Student Housing.

THE RUNKLE PRESIDENCY—1868-1878

The debt that education owes to President Runkle—How he successfully combined practical training with classroom work and what it means to the world today

The "New Technology" is so much a certainty that we already begin to think of it as an actuality. It means much to alumni:—buildings and equipment are essential parts in college leadership, and it would have been inexpressibly unfortunate for the Institute to surrender, for the lack of these, that proud superiority which she has established and defended so well in other more difficult and more important regards. Leadership in technological instruction represents today a greater responsibility than in the earlier years. There is a legion of rival schools, many of them of great importance, which contend for priority in the various and steadily multiplying branches of the work. Tech's new "lease of life" carries with it a guage for her best endeavor.

In the thought of this, one finds it difficult to realize how short, after all, is the history of technological education,—how recently it was that even the Institute came into her own in this work. The name of Rogers has a permanent place in our memories: the name of Walker is precious: and the name of Maclaurin seems to have magic in its meaning. They give high points in the Institute history, but there are important intervals between them. The purpose of this paper is to call attention to one,—to a time when there was forged the link in educational method, binding applied science to practical life, which gave the real significance to technological education. This interval was the presidency of Runkle.

Before the definite achievements of that time are narrated, it may be worth while to recall some of the problems which underlay the establishment of an institute of technology. Such a school was needed to supply men who could meet a triple requirement of the country at that time. It was the reconstruction period following the Civil War,—a period that involved transition and growth in the North hardly less profoundly important than in the South. There was wanted skillful labor, versatile ability, and far-sighted

administrative power. The ordinary practices of a trade, from apprenticeship up, produced skill without versatility: the jack of all trades was too likely to be the master of none: and the higher officials were more and more finding difficulty in meeting at once the two aspects of their problem—the commercial possibilities on the one hand and the industrial capacities of their plants on the other. What was wanted was a body of men who could unite skill with adaptability, and these with a broad generalship of direction and judgment. A combination so ideal seemed impracticable. Rogers saw that there could be but one way to realize it. All intelligent processes, he saw, must be derived from certain fundamental principles. These found, applied, and modified or adapted to specific needs, might comprise the course of a technological education. Thus he founded his School of Industrial Science. It involved the correlation of the sciences and the mathematical principles required for their application. It was achieved.

In the development of this conception, he found Runkle an invaluable assistant. Quick to appreciate it, loyal in adherence to it, unstinting in zealous work for it, Runkle could yet see further than the day's problem. It was not surprising that, when ill health drove President Rogers from his post, he placed matters in Runkle's hands, and later named him for succession to the presidency. Thus a labor undertaken without warning in 1868 turned into a paramount responsibility in 1870. At the age of forty-six, John Daniel Runkle, the professor of mathematics, became the master of Technology's fortunes.

Of the work of Runkle in the presidential office,—of the manifold debt that the Institute acknowledges for his courageous management during days of difficulty and doubt,—space forbids an adequate treatment here. The problem of support and maintenance alone was a tax upon strength and ingenuity. In addition, however, are to be noted the establishment of laboratories of mining engineering and metallurgy, the development of professional summer schools in the field, the beginnings of an engineering laboratory, and the introduction of shop instruction and the foundation of the School of Mechanic Arts. In these notable accomplishments—chosen from a much larger group—the great central project of Rogers was advanced and the Institute made for the second time a pioneer in American vocational education.

It was one thing to teach students the general applications of scientific knowledge. It was another to articulate this teaching with the actual processes and needs of the industrial world outside the Institute's walls. As it has been loosely expressed, "theory" had to be turned to "practice"; or, as may be more exactly said, approximate theory had to be made precise and definitive by practical experimentation. There were three possible ways for this to be done. One would require a practical laboring experience before admission to the course of instruction. Another would leave the practical experience to come with the student's employment after graduation. A third was to combine the practical training in carefully proportioned amounts with the other classroom work. It requires little insight, now, to see that this last was in every way the best. It was this which Runkle perceived, *then*, and made a reality.

In 1869, he wrote ". . . I met Commodore Rodgers, and the idea occurred to me that perhaps, in some way, our students in this department (mechanical engineering) might gain admission to the machine shop of the Navy Yard, during their long summer vacations, as volunteers. I suggested the idea to the Commodore, who said it would give him the greatest pleasure to issue orders in favor of any students I should send him. Now Mr. Hall and three of our students in mechanical engineering are at work in the yard with every advantage that a great shop can offer them. It virtually gives the Institute, without cost, a shop which it could not supply without a mint of money."

This was in '69. Soon came another step. The next year, visiting Colorado, he became impressed with the practical training afforded by the mining industry there, and in 1871 he took a party of five professors and seventeen boys on a summer school through the great west. On this trip, he realized that much of the loss and waste of unsuccessful mining ventures "was due to a want of practical skill joined with scientific knowledge." He decided that a mining laboratory provided with practical machinery for actual work upon large quantities of ore was essential for such instruction. The fulfillment of the idea came, in 1875, in the mining and metallurgical laboratories. The plan sounds self-evident, now. It was not so then. First steps are never self-evident. But what it meant in its results can be measured somewhat by our appreciation

of the impossibility of abandoning that element in the mining instruction of today.

In 1873, President Runkle asked Professor Whitaker, newly appointed as head of the department of mechanical engineering, "to suggest such a laboratory as will best aid in the education of mechanical engineers, and particularly in the solution of those experimental problems which lie at the foundation of all safe theory or practice." In the following year the nucleus of the mechanical engineering laboratory was obtained, in the form of the Dixwell engine, made by the Corliss Company at a cost of \$1250. This was bought on shares with Mr. George B. Dixwell, who wished to make tests of the action of superheated steam. The tests were made in the basement of Rogers, and the engine eventually became the property of the Institute, about it being grouped the successive additions which now constitute that excellent laboratory.

In 1876, however, came the greatest undertaking of all. Work shops, which the Institute in 1869 "could not supply without a mint of money," were to become a part of the school's equipment. The inspiration that gave rise to this was found in the Russian industrial school exhibit at the Philadelphia Centennial Exposition. There was found the plan, worked out upon a pedagogical basis and proved by years of experience in St. Petersburg and Moscow, which President Runkle described in his report as follows:—

"In all constructions a certain limited number of typical forms are found, these forms being more or less modified, to adapt them to special constructions. These forms will also fall into groups each to be worked out in a certain way and with special tools. If, then, the student can be taught to work out these forms, each in the best way, and with the tools best adapted to the work, he will be far advanced in the skill which will make him available and useful in construction. . . . In the light of the experience which Russia brings us . . . it seems to me that the duty of the Institute is plain. We should, without delay, complete our course in mechanical engineering by adding a series of instruction shops, which I earnestly recommend."

The Corporation authorized the erection of a temporary building for this purpose. It stood between Rogers and the present Walker Building and was about 170 by 40 feet in area and one story high. It was called the "Annex." In it were a machine shop, a foundry, a chipping and filing shop, a bench and lathe

room, and a forge room. It was the original Tech shops, and, more yet, it was the original in the United States, from which was copied the shopwork system of many other schools over the country. There were already other school shops—in a letter of that time, President Runkle refers to three, at Illinois, Cornell, and Worcester—but in these the idea had been the restrictive one of construction of marketable products, with the ideal of recovering cost by receipts from sales. As we have seen, the idea of Runkle was of *instruction* in a systematic order of training,—not only a more costly and complex undertaking but also a far more valuable one. To do this, was to put the Institute into the very forefront of its kind. This was the invention of Russia: its application to American education was the work of Runkle.

Beside the "Annex" was another building, which had preceded it by two or three years. This was a low wooden structure, used as a drill hall and gymnasium, with a lunch room at one end where "full dinners are served for 35 cents." In its turn, this building also represented an important phase of the Institute's growth under the wise guidance of President Runkle.

It must be remembered that Technology was only four years old when he assumed its charge. Much, of course, was to be done. The remarkable thing in his doing it was not merely that he could see the need, define it, and in the uninspiring tribulations of the panicky seventies materialize it, but that he could make this manual element of shops and laboratories so efficient a part while yet holding it subsidiary in the great plan as a whole. The Institute did not shrink into a trade school but held true to its search for that "scientific imagination" which is the real genius of the engineer. If it is hard to conceive of the Institute *without* the practical laboratories which he introduced into it, there is no less difficulty in conceiving of *the* Institute with them *only*. Admiration for the persistence, resourcefulness and optimism which achieved these additions is succeeded by wonder at the farther sight and keener judgment which preserved them in their due proportion. It is in this that the greatness of Runkle was proved.

The foregoing is a meagre account of his presidency, when that is viewed as a daily problem of administration with the questions of maintenance, finance, and daily operation pressing with increasing difficulty year after year. The graduate body had increased from 30 in 1870 to 223 in 1878. Instructors had increased

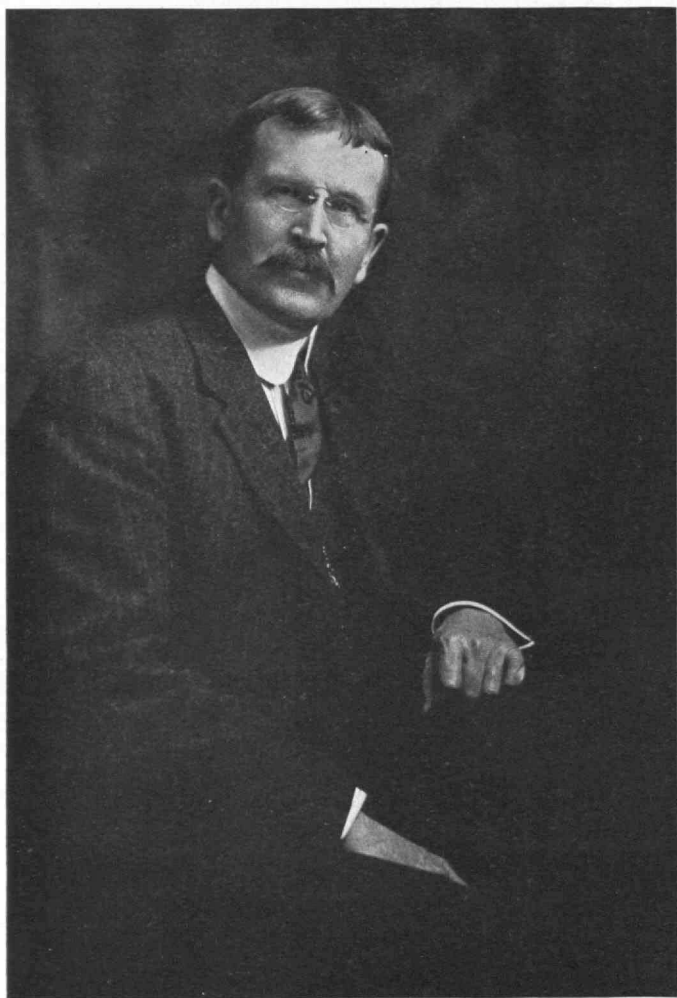
by fifty per cent; the faculty by eighty per cent. That all this was done, is the important fact to us today. How it was done, can probably never be fully told. That it could have been attended by an expansion of the Institute's facilities remaining today of such positive significance, must be sufficient eulogy of the period. Only courage, loyalty, optimism could be accountable for it all. Errors and frailties, which are the lot of all men according to their dispositions, become negligible beside these strong qualities so strongly given when so greatly needed.

Disappointments must have been many, many certainly coming as his own portion in the distribution of such fortune: and it is with an almost poetic fitness that our chronicle can show their extinguishment in the twenty years of professorial life following his presidency, when Professor Runkle maintained his connection with the Institute and gave a charming personal meaning to the later years of Technology history. One who was a student in those later days has written of his "venerable but robust figure, the somewhat straggling locks of gray with a tawny tinge, the stimulating, luminous, unconventional exposition, the quick, incisive questioning, the surprising blackboard drawing, the inimitable touches of the confidential or the monitory, the constant substratum of uplifting earnestness and dignity. None of his students could fail to acquire admiring affection: very few could withstand the incentive to work."

Resigning his presidency in 1878, Runkle was succeeded by his close friend and former leader, President Rogers. It could only have been a pleasure thus to hand over his work to one who had been the original inspirer of his energies,—to one who had written at his resignation these words of discerning approbation:

"I cannot let him relinquish the position which he has filled so long and so disinterestedly without expressing my sense of the great value of his services to the Institute. Few persons know the labours and the perplexities which have been involved in carrying forward the plan of the Institute to its present widely expanded activity, but all who have marked its progress will, I am sure, agree with me in a most grateful recognition of the unflagging devotion to its welfare which President Runkle has always shown, and will be assured that his zealous and disinterested labours as President of the Institute must always have an honored place in its history."

EDWARD H. DAVIS, '00.



J. KNOX TAYLOR

J. KNOX TAYLOR COMES TO THE INSTITUTE

Supervising Architect of the Treasury Department to be connected with the Department of Architecture—What Mr. Taylor has accomplished for the Government

For the second time the past month President Richard C. Maclaurin of the Massachusetts Institute of Technology announces the finding in Washington of a man high in authority who is coming to join the already remarkable staff of professors, and James Knox Taylor, Tech '79, has been invited to become professor in the department of architecture. The Institute strikes high, for a short time ago it was Lindgren, chief geologist of the U. S. Geological Survey who was invited to come to Boston, and now it is Mr. Taylor, supervising architect of the Treasury Department, "The National Architect" he has been publicly called, who is coming to strengthen what is already the foremost department of the kind in the country, that of architecture in Technology.

The position which Mr. Taylor has given up to come to Boston is the most important one of the kind in the country. "It is due to him that the character and designs of the buildings erected by the Treasury Department have very materially improved," said R. Clipston Sturgis, president of the Boston Society of Architects. "During his administration and with his hearty coöperation and support, the Tarsney Act was carried. Under its operation the Treasury Department has been enabled to have competitions among architects carefully selected for the more important buildings of the department."

It was the Chicago Exposition that opened the eyes of the people to the inferior quality of Government architecture, and following it shortly Mr. Taylor became supervising architect in a civil service competition in which he stood with only one above him in the tests. The improvements due to his coming have been most striking. "It has been equal in quality to that produced by private architects," notes one authority, which is praise indeed, when one considers the limitations and temptations of public work. "The result of his work has been," says Mr. Sturgis, "the

erection of a large number of buildings which compare favorably with buildings of the same class abroad, and are very creditable to the United States Government."

Mr. Taylor has been for fifteen years in this "first position in the land" and of his administration the New York *Sun* has spoken editorially, first on the absurdity that the architect who has probably more money to expend than any other in the world, should be treated in so niggardly fashion in respect of compensation and in respect of official rank and standing. "It is largely in spite of the official system," writes this editor, "and in virtue of a system which he has had to devise for himself, that Mr. Taylor has been enabled during all these years to do so much good work."

Attention has recently been called to the department of architecture of the Institute by the retirement of Professor F. W. Chandler, who for twenty-three years was its head. It is the oldest school of the kind in the country, and Professor Chandler joined it when it had been in existence only four years. "When he came to us," said President Maclaurin at the complimentary dinner in his honor, "architecture in America was a snap course and rarely did the vision of the teachers rise above the level of the drafting table. Chandler dignified the study and made his colleagues and pupils realize that architecture must have for its foundation the skill and precision of the engineer, the commonsense and sound judgment of the business man and the imagination of the artist.

In the fulfillment of this principle Professor Chandler attacked the problem of the architectural student, who ranked usually as an artist doing what he liked at his own sweet will, and made of him an engineer. The effect of this has been to put the department on a high plane. "Professor Chandler's influence," said Mr. Sturgis at the time of his retirement, "was what is needed to balance artistic enthusiasm, and bring out truly beneficial results, and in the opinion of all architects, he has put forth a product that is the best in the country." In his letter of resignation Professor Chandler said, "I shall leave a finely organized department which would not have reached its present efficiency except through long years of generous and loyal co-operation of the other members of the staff." These men whom their departing chief so compliments are Desire Despradelle, Rotch professor of architectural design, William H. Lawrence, S. B., and Harry W. Gardner, S. B. and it is into this company that Mr. Taylor is to come.

For the merest outlining of the sphere of Mr. Taylor, President Maclaurin noted that he will keep the department in touch with what is doing in the world. There remain the sterling men who will keep to Technology tradition. Mr. Taylor is pre-eminently the man who can do this, for his experience in the Treasury Department has brought him in contact with every prominent architect in the country. The Institute is fortunate in finding a man who has this knowledge, and who is so thoroughly conversant with the business aspect of architecture, the relations of architects to their clients and particularly to the Government which is constantly becoming more and more a client. Such a setting forth of practical matters and by a man so well acquainted with every detail will serve to strengthen the courses in architecture where such courses are customarily rather weak.

On learning of the final arrangements between the Institute and Mr. Taylor, J. B. Stearns of Peabody and Stearns said, "Mr. Taylor has done so well in Washington and has such a large experience in important works that he cannot fail to be a good executive and a valuable addition to your force." Cass Gilbert of New York, architect of the Woolworth building, himself an alumnus of Technology and most successful in his profession, said in the matter, "Mr. Taylor has for fifteen years filled the position of supervising architect with distinguished success. He is a man of unquestioned integrity and most exemplary personal character. He is universally popular with the architects and once when he thought of resigning, Mr. McKim said it would be 'a public calamity' if he should leave that position." Then again in Boston, W. Clipston Sturgis on learning of the invitation said, "It has long been a source of wonder to the profession that Mr. Taylor, with his great abilities, should have remained so long in a position which offered so few material advantages. It is true the position gave great opportunity for work, but there are few who are willing to work for work's sake without adequate remuneration, the Institute of Technology is to be congratulated on having secured the services of Mr. Taylor and it will be of enormous service to the department to have a man with so wide a range of experience in design and construction, and who has shown himself as well an able executive."

James Knox Taylor was born in Knoxville, Ill., in 1857, and was educated in the St. Paul public schools and the Massachusetts Institute of Technology, 1877-79. He was in business in New

York for three years, in St. Paul, ten years and in Philadelphia, three years. He entered the service of the Government in 1895, became principal draughtsman and in 1897 was appointed supervising architect of the Treasury Department. The work undertaken by his office has amounted to constructions up to \$12,000,000 in a single year.

Tech Man Wins Prize of Rome

Word has been received that K. E. Carpenter has been awarded the Fellowship in Architecture at the American Academy in Rome in this year's competition. There were 71 applicants in the preliminary competition for this prize from various colleges in the United States; four of these were selected for the final competition, three of whom were graduates of the University of Pennsylvania. The problem was "A Design for a Navy Yard on an Island in the Southern Pacific Ocean."

The successful competitor, Mr. Carpenter, is a member of the class of 1909, department of agriculture, Massachusetts Institute of Technology. In 1910 he took the course in advanced design, and since leaving the Institute has been in the office of Codman and Déspradelle. The two other Technology graduates, Messrs. E. F. Lewis and E. I. Williams, have also been the beneficiaries of this fellowship, which was founded in 1908.

The fellowship in architecture carries with it an award of one thousand dollars a year for three years. The fellows are required to report October 1 at the American Academy in Rome, where they are provided, free of charge, with studios and sleeping quarters. The academy at present occupies the Villa Mirafiori, but in the near future it will move into the Villa Aurelia which has been recently donated to the academy. It is the outgrowth of the American School of Architecture in Rome, founded in 1894, mainly through the efforts of the late C. F. McKim. Its purpose is similar to that of the well-known French Academy in Rome, which occupies the Villa Medici.

It is interesting to note that the present director is G. P. Gorham, a graduate of the class of 1898 at the Institute of Technology.

FIRST AMERICAN VOLCANO OBSERVATORY

Dr. Jaggar has left for Hawaii to take charge of the Technology station now built and partly equipped

An article on the new Technology volcano observatory in the Hawaiian Islands by Dr. Jaggar, which recently appeared in the Boston *Transcript*, will be of interest to the readers of the REVIEW:—

Massachusetts Institute of Technology has the distinction of being the first American institution to establish on American soil a volcano observatory.

After negotiations which have been in progress since 1909, when a special journey was made to the Hawaiian Islands by Professor Thomas A. Jaggar, Jr., head of the department of geology at the Institute, a laboratory has been built at the much-frequented crater Kilauea, with several sub-stations, and a definite organization has been adopted for promoting scientific work there. Professor R. A. Daly of Technology gave the summer of 1909 to Hawaiian investigations in geology. In 1911 F. A. Perret built a hut at Kilauea and accompanied by Dr. E. S. Shepherd of the Carnegie Institution, stretched a cable across the lava and measured its temperature with electrical apparatus. Mr. Perret slept at his camp on the very edge of the lava pit, made incessant measurements and photographs, and called the little house the "Technology Station."

During the past winter Professor Jaggar succeeded Mr. Perret at the station and built a more substantial observatory. The main building is near the hotel and post office, known as the Volcano House, on the edge of the cliff that bounds the greater crater of Kilauea in Hawaii. It is on the highway and in close touch by railway with the town of Hilo. Subscribers in Hilo presented the building. It is equipped with two laboratories, directors' room, photographic dark room, and storeroom, on the main floor, a porch extending along two sides commanding views of the three volcanoes, Kilauea, Mauna Loa, and Mauna Kea. In front there is a concrete post for geodetic experiments. The furniture in-

cludes large cases of drawers, for storage of specimens, maps and photographs, and there are work-tables and drafting-tables.

The seismograph cellar, known as the Whitney Laboratory of Seismology, eighteen feet square, is floored on the solid ledge of basalt. It is equipped with three principal instruments built in Tokio, under the direction of Professor Omori. These are a horizontal pendulum tromometer, magnification 120-200, designed for registering distant earthquakes; and a tiltometer for recording changes of the vertical. A fourth instrument now in Boston and not yet installed, is a Bosch-Omori 100-kilogram tromometer made in Strasburg. Besides these, an experimental kymograph with devices for recording local tremor in the vicinity of the active lavas has been constructed for the observatory. Other instruments are pyrometers, photographic and surveying apparatus, microphones, gas-meter and several special thermometers.

The observatory is supported by the Whitney fund of the Institute of Technology, the Bishop Museum in Honolulu, and by an association of subscribers. The small station at the active lava pit of Kilauea, built by Perret in 1911, is now an instrument house, with a smaller hut adjacent designed for routine measurements and physical experiments. The United States Weather Bureau has furnished the observatory with a set of standard meteorological instruments and the Territorial Government, in coöperation with the United States Geological Survey, is preparing detailed topographic maps of the volcanic area.

The plan of the observatory involves two distinct aims. First, continuous registration and record of lava movements and effects peculiar to the district and well known to be of fundamental import; second, experimentation on physical or chemical phenomena in their relation to these geologic peculiarities. The permanent staff is at work upon the problem of continuous recording. As an experiment station, the observatory will welcome accomplished specialists, and some fellowship aid can occasionally be granted to such work. Not more than one or two such investigators can be accommodated at one time, and it is desirable, owing to the expense of the journey and the field conditions, that such persons remain for from six to eight months, in order to insure results of value. Under the terms of certain funds held by the Institute, notably those from the estate of the late Caroline and Edward Whitney, it is desirable that some investigations made at the ob-

servatory shall have direct bearing on the protection of life and property from earthquakes and volcanic eruptions.

The staff administering the affairs of the observatory at the Institute at present consists of Thomas A. Jaggar, Ph.D., professor of geology, director; Reginald A. Daly, Ph.D., professor of physical geology; Charles H. Warren, Ph.D., associate professor of mineralogy, and an assistant, Francis B. Dodge of Honolulu.

The observatory in Hawaii will receive a limited number of advanced students engaged in research dealing with problems of volcanology and seismology. This work is open to men specializing in physics, chemistry, meteorology, biology, geology, physical chemistry and civil engineering, but is limited to persons of advanced attainments and is especially suitable to candidates for the doctorate.

The following topics are these subjects suggested for work in the Hawaiian field; (1) Spectroscopic study of volcanic flames; (2) collections and analyses of volcanic gases, with special reference to Brun's theories; (3) optical pyrometry applied to molten magma in the field; (4) mineralogy of Hawaiian solfataric deposits; (5) local earthquakes, in relation to construction; (6) angular measurement of rapid changes in the vertical in a volcanic region; (7) variation of the lower forms of life in relation to volcanic vents; (8) special studies of petrology, physical geography and structural geology in the Hawaiian Islands.

Professor Jaggar has been granted leave of absence for five years, and sails for Honolulu early in June. A crisis which has been expected for a year past is the periodic eruption of the great volcano Mauna Loa, and telegrams of May 23 suggest that such an eruption has begun. Mauna Loa is the greatest active volcano on the globe, some of its lava streams being forty miles long and flowing many months. It rises nearly 14,000 feet above sea level and over 30,000 feet above the floor of the Pacific Ocean. The characteristic Hawaiian volcanic eruption is a great frothy overflow of lava with fiery fountains playing hundreds of feet into the air, but without the disrupting explosions so fatal in other places. Mauna Loa is a few miles from the observatory on Kilauea, and of great interest to the observers there in comparison with the less spectacular, but more constant lava pool of the latter. It is hoped that an accomplished seismologist trained in California, will accompany Dr. Jaggar and become an associate of the observatory. Drs.

Day and Shepherd of the Carnegie Institution are now in Hawaii and expect to spend the summer in investigations of optical pyrometry and spectroscopic analysis.

The answer to the question commonly asked, "What is the use of such studies?"—is difficult if the questioner is wholly ignorant of science. What is the use of an agricultural or zoölogical experiment station, or of an astronomical observatory? The volcano observatory is a geological experiment station. It is designed to seriously study for many years to come the physics and chemistry of the earth's interior and the reactions of that interior on the crust. From such gases and lavas as are boiling at Kilauea have come directly or indirectly our iron, gold, silver, copper, soils, building stones and fertilizers, fuels and chemicals, the air we breathe and the water we drink, and probably also our food as represented by animal and vegetable life. The primitive earth may have been dotted with hundreds of such lava fountains. Just as the geologist would revel in the privilege of dwelling for a space amid the haunts of the ancient saurians, or of joining with our aboriginal forefathers in a mastodon hunt, so he welcomes today the opportunity offered by the civilizing of a volcanic land, whereby he may take up his abode upon a landscape which resembles the face of the moon, and study with modern implements the most fundamental problems of cosmogony.

An Alumni Responsibility

This number of the REVIEW contains an article on the Walker Memorial and another on Student Houses. The authors ask for any suggestions that the readers of the REVIEW can give. This side of the development of the Institute has been properly placed in the hands of the Alumni. It is an unusual problem and one that should be treated broadly and liberally. It is necessary to treat this matter in the scientific spirit and the committee is desirous of receiving any suggestion that may have a bearing on the subject.

THE TECH ISLAND CLUB

Proposed Technology Country and Yacht Club on Buzzards Bay—May be ready next summer

Among the Miscellaneous Clippings in this issue of the magazine is an article by Winthrop Packard, '85, taken from the *Boston Transcript*, telling about the offer of an island in Buzzards Bay to the class of '85, provided the class will establish a Technology club thereon. This island contains about fifteen acres, beautifully located at the mouth of Onset Bay about a mile away from the entrance to the Cape Cod Canal. The view is unobstructed on the eastern side of Buzzards Bay to Monmouth Beach. It is adjacent to Burgess Point where are now some of the most beautiful houses along the bay. Only at the very highest tides is the land between the island and the shore flooded. A roadway six or eight inches high will have to be built to the shore although vehicles can easily cross even at high tide.

A committee consisting of W. E. Spalding, the president of the class, F. H. Page, C. A. Brown, Everett Morss and I. W. Litchfield was appointed to take up the island matter and make arrangements relative to the founding of a club, that would be satisfactory to Mr. Page. It is the idea of the committee to raise from three to five thousand dollars from the members of the class as a class gift toward this enterprize. An invitation will then be extended to other Tech men to join the club which will probably be called "The Tech Island Club." The corporation will be known as the Class of '85 Incorporated and the ownership will probably be vested in, say, nine trustees elected by the voting members, including associates. The initiation fee will be about forty dollars and the dues twenty-five dollars a year. It is believed that sufficient men will be willing to join the corporation to make it possible to put up buildings and make betterments on the island to the extent of, say, twelve thousand dollars. President Maclaurin has expressed his hearty approval of the plan and it is believed that if a scheme of this kind can be properly carried out it will be a great advance to the social side of Technology. The committee believes that the

club should be run in a first class manner so that members could take their families and friends there at any time during the summer.

Architects Horace Frazer and E. B. Homer, members of the class have volunteered their services and have already begun on tentative plans. It will be necessary to secure at least one hundred and fifty members from outside the class, and it will be a great help to the committee if any of our readers who are interested in this venture will write expressing themselves in regard to the matter.

The committee has suggested that a limited number of life memberships be offered at \$350.00 a year.

If the Tech Island Club receives sufficient encouragement, plans will be begun in the early fall and possibly building operations commenced so that it could be ready in June, 1913.

The island is something less than one hundred miles from Boston by way of the Cape Cod Canal by boat and sixty miles by automobile. The channel off shore runs from seven to ten feet at mean low water. It is a favorite run for the New Bedford Yacht Club and is a great harbor for all kinds of craft.

Interesting Class Notes.

The class news in the TECHNOLOGY REVIEW is growing in interest with each succeeding issue. The present number is particularly attractive because it contains descriptions of the reunions of the five-year classes. Most of them are illustrated. The class of 1908 has some statistics in regard to salaries of its members, and the class of 1907 has also taken a salary canvas. Among the letters received by class secretaries which are worth reading is one from W. H. Adams, '03, and another from Hayden, '03. Other letters, written from various parts of the world, while mostly of a personal nature, contain interesting descriptions of the various countries represented.

THE "FULTON," THE NEW TECH BOAT

To be used for special research by the Department of Naval Architecture and Marine Engineering—Description of the boat

A matter of great interest at the Institute has been the launching of the *Fulton*, the second vessel of the Tech navy. This one, like the *Froude*, is to have its home in the Charles River Basin with its testing grounds along the wall of the embankment where later are to be erected the splendid and harmonious structures of the New Technology.

The *Fulton* was built under the eye of the department of naval architecture and marine engineering of Technology in the shops on Garrison Street. As a matter of convenience the keel was laid in one of the laboratories in the second story and to launch the boat the wall was cut away and the vessel lowered to street level on crib work. The wall removed will be replaced by windows.

The *Fulton* is a towboat, a type about which there is very little known today in a scientific way, although it is a most important form in which the great number and constant employment makes it desirable to determine the most efficient forms. The research has been possible through the interest of two well-known yachtsmen of New York city, Arthur Curtis James, an enthusiast for the sport and Clifton H. Crane, the famous yacht designer. These men learned of the value of the experiments with the *Froude* and on the death of the previous generous supporter of the research, Dr. Charles G. Weld, stepped into the breach with the guarantee of support at least through another season. In deference to the wishes of the donors, the towboat model was taken up and the Technology shops have been busy this spring in building the *Fulton*, a revelation to many who have not realized that the Institute has in its mechanical force the men who can actually build ships.

The new vessel is a replica of the Government tug, *Sotoyomo*, the home waters of which are the extreme northwestern ones of the United States. It is to one-third the scale of the tug, has precisely similar lines and draft, and, it is expected, speed in proper

proportion. In length and other lines the measurements of the *Fulton* are one-third those of the tug. In this it is proportionately larger than the *Froude* for this was one-fifth the scale of the *Manning*.

For the benefit of those who are interested in vessels the dimensions of the *Fulton* are here given with some facts about its structure. The length on the water-line is 36ft., 6 in.; beam, 7 ft.; draft, 3 ft., and displacement, 10 tons. The propeller was built expressly for the little boat by the Hyde Windlass Co., which has taken extraordinary pains to produce an exact replica of that of the *Sotoyomo*. Its diameter is thirty inches, and its pitch, 38 2-3. The frames of the boat are of white oak 2 1-2 in., by 1 1-4, and are all sawed to the proper bevel. It is customary to bend the frames, which are what Longfellow and other poets have termed the "ribs," and usually only one in three or four is cut to the bevel of the sides, the others presenting a more or less square corner. The sawing of the frames will prevent any tendency that bent ribs might have to become distorted, while the beveling of every frame will prevent strains in the planking. For such a vessel, which is to be a floating laboratory it is well worth while to take every precaution against known sources of possible error.

The keel of the *Fulton* is oak 6 inches molded by 3 inches, sided with yellow pine stringers and clamps. The planking is 1 inch white cedar with plankshear of oak and the deck is 1 inch white pine. The dock beams are 3 inches by 2.

The motive power of the *Fulton* will be that of the *Froude* transferred, the latter being this season the service boat and the sleeping quarters of the crew. The motive power is a connected gasoline motor and dynamo, the current from the latter running a motor that is connected by chain drive to the shaft on which is the propeller. The machinery thus affords an opportunity to take tests at every point. The operating platform is located forward on the *Fulton* and the boat has the minimum amount of out-of-water body possible. Being broader than the *Froude* the new boat has no house or deck erections of any kind and when under way it will practically be an open boat. This has its advantages in minimizing wind resistance. The work with the *Froude* showed the importance of the piston of propeller and the new boat will be able even in greater measure to push the wheel back farther from the hull, the maximum distance provided for being three feet, corresponding

to nine feet with the *Sotoyomo*. Manoeuvring is obtained by means of a partially balanced rudder hung on the extreme end of the overhang aft. The stern is an exact copy of the stern of the tug, while it is proposed to locate the towing bitts in the same place as the Puget Sound towboat.

The experiments with the *Fulton* will be carried on by Professor H. A. Everett, who has devised and adapted the recording machinery used in the tests. These tests consist of quarter-mile runs in the Basin, the details of which are recorded on a kind of chronograph. There are a number of elements like number of propeller turns, pressure against the thrust block, etc., that are automatically set down on the record slip together with time marks. Other observations are also made, the boat being a floating laboratory and fitted only as such a laboratory should be fitted.

The *Froude* which as the pioneer boat of its kind very properly bears the name of England's pioneer naval architect, demonstrated quite a number of items with reference to the type of vessel that it represented. It showed that such models are capable of giving results that are trustworthy from the scientific point of view, and the construction of some novel form of vessel can be preceded by that of a comparatively inexpensive model whose behavior will be indicative of that of the larger boat.

The work of the Tech navy is unique. For the first time models that are truly proportional to their originals have been set to work. The results have been important, and there remain still in the future for investigation some of the most important types of steamships, the coastwise vessel, for example, concerning which little is known today.

Try "Tech" Admiral

During the Spanish-American War the Navy Department, by way of a graceful compliment to the great universities, renamed two converted cruisers *Harvard* and *Yale*. Not long after Commodore Dewey was asked what new names should be conferred upon two little Spanish gunboats that had been captured in Philippine waters. "Oh," said the Commodore, "we'll just call one *The Massachusetts Institute of Technology* and the other *The Pennsylvania College for Physicians and Surgeons*."—*Life*.

TECH RECEIVES A VALUABLE LIBRARY

Mr. Theodore N. Vail, president of the American Telephone and Telegraph Company has presented to the Institute, through President Maclaurin, the Dering Electrical Library which is said to be the most complete collection of comparatively recent works on electricity in the world. The value of this library is estimated to be about one hundred thousand dollars, and Mr. Vail has added to his gift twenty thousand dollars for its maintenance.

The library was collected by George Edward Dering of Lockleys, Herts, England, who died in 1911 at the age of eighty. He was more than forty years collecting this library which was the chief hobby of his life. He gave an unlimited order to Nutt of London for books pertaining to electricity in all languages, and the bills of this one firm amounted to more than fifty thousand dollars. In addition to this he attended all the important sales, and collected about thirty thousand titles. Great boxes of books that had never been opened were found in his house, including every book on electricity that has appeared within the last sixty years. There are more than eighteen thousand volumes, and nine thousand pamphlets, besides reports and periodicals. In addition to the books on electricity there is a fine collection of volumes on iron and steel. This is also practically a complete collection of books on these subjects published during recent years.

The library of the Institute is already superior to that of any technical school in the United States, numbering one hundred thousand volumes, and in the department of chemistry and civil engineering it has no peer in the country. The addition of the Dering Library presented by Mr. Vail will probably put it on a par with any similar library in the world, except perhaps that of the Institute of Electrical Engineers in London.

Mr. Vail has always taken great interest in the Institute. Much of the early research work on the telephone was done for the Bell Telephone Company by Professor Cross and others connected with the Institute, and a great number of Technology men have always been employed by the Telephone Company. Mr. Vail is a member of the Society of Arts of the Institute, and on its Executive Committee.

LOCAL ALUMNI ASSOCIATION NEWS

Grand Summer Meeting of the New Hampshire Association at E. W. Rollins' Three Rivers Farm—Activity at Seattle

TECHNOLOGY ASSOCIATION OF NEW HAMPSHIRE.—The growth of social relations among the alumni of the Institute was never more emphatically shown than at the meeting of the Tech Association of New Hampshire, June 30, when Mr. E. W. Rollins, '71, invited the entire tribe to his beautiful "Three Rivers Farm," at Dover, N. H. One who has never had the delight of being entertained at Mr. Rollins' home can have little idea of the definition of the word hospitality. As the automobile loads and delegations from the trains arrived the host met them at the door and gave them the freedom of the farm which included everything that was to be desired. The day was a perfect one, and in a beautiful pine grove a lobster and clam artist from Portsmouth was preparing a shore dinner in the most approved fashion. Here, later on, dinner was served, the ladies of Mr. Rollins' household and neighbors, attending to the wants of the guests. During the very short intervals between courses there was an opportunity to sing Tech songs and cheer Technology and "Ned" Rollins. During the dinner Lauder, '89, arose in his place and asked if he might be permitted to express a sentiment as it occurred to him at that moment. His speech as recorded by the newspaper men present was short but effective:—"This is some feed!" There were about fifty at the table and after dinner Mr. Rollins introduced his brother, Frank W. Rollins, '81, ex-governor of New Hampshire, as toastmaster. Governor Rollins' references to his own student days at Technology were most interesting. He described the social conditions, told incidents connected with members of the Faculty and his own classmates, especially referring to Mrs. Stinson, Prof. Burrison and others, who were cheered as their names were mentioned. He then called on Mr. Litchfield, '85, who spoke briefly of the Technology Fund and who was followed by Mr. James W.

Rollins, '78, president of the Alumni Association, who told of the growth of the Alumni Association and especially of the social advances that were being made by just such gatherings as this one. He then made a stirring appeal for funds from the alumni for the new Technology, stating that it was the intention of the committee to get some contribution from every man, even if it was a small one. He believed that when the Fund was finally closed that New Hampshire would make a creditable showing. Mr. J. L. Arnott, '75, president of the New Hampshire Association, on being called upon, endorsed the remarks of Mr. James Rollins in regard to the Alumni Fund. He hoped that every man would contribute something, even if it was small. He expressed the great debt of the association to the host of the day through whose hospitality the club had been so delightfully entertained. Mr. T. W. Fry, '85, of Claremont, N. H., chairman of the Fund, was unable to be present but his representative was there and the New Hampshire contribution will be largely increased as a consequence. After dinner the party adjourned to the house where entertainers from Boston told stories and sang until late in the afternoon.—*Andrew Fisher, Jr.*, '05, *Secretary-Treasurer*, 186 Lowell Street, *Manchester, N. H.*

TECHNOLOGY CLUB OF THE MERRIMACK VALLEY.—The delayed annual meeting of the club was held at the rooms of the Lowell Institution for Savings, Lowell, on Tuesday May 7, 1912. This meeting should have been held in February, but at that time the president, Mr. Carney, was ill with scarlet fever and Lawrence was in the midst of the great textile strike. For these reasons, it was deemed best to postpone the event.

At the meeting on May 7, the following officers were elected:—president, Ivar L. Sjostrom, Lawrence; vice-president, George C. Dempsey, Lowell; treasurer, W. D. Hildreth, Lowell; secretary, John A. Collins, Jr., Lawrence; member executive committee, John Alden, Andover; representative to Alumni Council, Channing Whitaker, Lowell.—*John A. Collins, Jr.*, '97, *Secretary*, 67 Thorndyke Street, *Lawrence, Mass.*

THE TECHNOLOGY CLUB OF PUGET SOUND.—The Technology Club of Puget Sound, still lives, though some of its officials are so busy they scarcely have time to jolly their hungry spot. The

N. E. L. A. meets in convention here next week. There are some three thousand delegates, and you can imagine that the taking care of such an aggregation is some matter for consideration. Everybody works at our place.

On April 16, the club had its regular luncheon, entertaining Mayor George F. Cotterill of this city, Mr. Daniel Kelliher, president of the local Harvard club, and some half dozen other guests.

On May 21 our luncheon was given over to the Fund committee, and Mr. George B. Harrington, '04, read a very interesting paper on the subject telling us the plans of the Fund committee and how those plans are being worked out. We are all very much interested to hear of the millions that are being poured into the good work. I have no doubt that if some of us out here were substantially established we would contribute heavily to swell those millions. As it is, I understand that the subscriptions are coming in well, though of course, like all subscriptions, they are a little slow in starting. But we hope and expect, that our part of the world will do its part.

No plans are yet made for a meeting during convention week. Mr. A. F. Bemis, '93, passed through town on the 31st, and a dozen of us gathered to meet him and hear first hand what is going on. The convention people have such a full program that it may be necessary to give up the meeting unless it can be held between midnight and the wee sma' hours. Our regular meeting comes on the third Tuesday of each month.

June 24 we had the best meeting that the club has ever had. Although there were but fourteen present, they were live ones and Mr. Fay gave us an excellent talk on the "New Technology" from the year one up to the present time: how it all came about; who did it, etc. It was a fine talk. Just before our luncheon, election of officers was held at which the following officers were elected: President, Charles H. Alden, '90, Prairie Building, Seattle; vice-president, Clancey M. Lewis, '99, 317 Pacific Block, Seattle; secretary, M. P. Anderson, '10, 111 Cherry Street, Seattle.—*L. A. Wallon, '04, Secretary, The Seattle Electric Co., Seattle, Wash.*

TECHNOLOGY ASSOCIATION OF GREATER BIRMINGHAM.—While in Nashville during the early part of May, the secretary and Mr.

Morris Knowles, '91, succeeded in getting together for luncheon three of the four Tech men in Nashville. Those present were R. W. Balcom, '00, G. C. Norton, '04, and Lee R. Loveman, '99. Mr. T. S. Marr, Jr., '94, is also located in Nashville, but was unable to be present.

A few weeks ago G. T. Gambrill, '08, and Miss Kathleen Stringfellow of Birmingham, were married in this city. Mr. Gambrill has recently accepted a position with the Woodward Iron Company the vice-president and general manager of which is A. H. Woodward, '00.

A new comer in the district is William E. Mitchell, '03, who is located in Montgomery, Ala., in connection with a large power development, being undertaken by the Alabama Interstate Power Company.

Another recent discovery is C. H. Crawford, '09, who is located at Athens, Ala., as division engineer of the L. & N. Railroad. The secretary was particularly glad to locate Crawford, as the latter had lost touch with his class for some time.

It has recently been learned that Mr. William Leslie Welton, one of the most prominent architects of Birmingham, took a two years' course in design under Prof. Despradelle at the Institute, and while he never enrolled as a student, he acquired a strong interest in Tech and Tech men. He is ineligible for membership in the Alumni Association, but has applied for membership in the local association, and will keep up his interest in the Institute.

There have been no meetings recently but it is expected that one will be held during the latter part of June.—*Maurice R. Scharff, '09, Secretary, 1140 Brown-Marx Building, Birmingham, Ala.*

Summer School of Civil Engineering

The new Summer School of Civil Engineering is now practically completed. The camp will open on Wednesday, August 7, and close September 25. Professor Spofford, head of the department, is now actively engaged in equipping the camp, and Steward Colton of the Union will look after the culinary department. The course will be a portion of the regular curriculum and will be obligatory to students of certain grades. Besides the course given at the camp others will be given in Boston in surveying, astronomy, and structures.

TECH MEN IN THE PUBLIC EYE

EDWIN H. BLASHFIELD, '69, was last month appointed by President Taft to fill the vacancy on the National Commission of Fine Arts caused by the death of F. D. Millet, who was lost on the *Titanic*.

HENRY J. HORN, '88, has been selected to succeed Frank Barr as operating vice-president of the Boston and Maine system. The change took place June 30. Mr. Horn will be in charge of the road's operations. He has been operating vice-president of the New Haven system since Jan. 1. After being graduated from Technology he was connected with the Burlington's Western lines, and subsequently served the Northern Pacific under Mr. Mellen. With the latter, Mr. Horn came to the New Haven and was appointed assistant to President Mellen on Dec. 1, 1910.

PAUL B. NASH, '97, is American consul general at Budapest. After studying at Hobart College, the Institute of Technology, and at Columbian University, Washington, D. C., where he acquired a knowledge of international law, he traveled in the Far East and in Europe studying industrial and commercial conditions. He has been consul general at Bangkok, consul at Venice, Vladivostok, and Rheims, and was appointed consul general at Budapest in 1908.

C. J. H. WOODBURY, '73, is one of the most widely known writers on textile and allied subjects in the United States. He devoted his vacations while at the Institute, and a year or two afterward, to obtaining practical shop experience in various engineering lines, afterward becoming superintendent of a mill in Rockport until he went into the service of the Factory Mutual Insurance Co., as their engineer, and later vice-president. In 1894, Dr. Woodbury became assistant engineer of the American Bell Telephone Co., which he held until late in 1907 when that department was moved to New York, since which time he has been in consulting engineering practice. For many years he has been secretary-treasurer of the National Association of Cotton Manufacturers, and much of his engineering work has been devoted to special investigation

along the lines of his experience. He has received an honorary degree of master of arts from Tufts College, doctor of science from Union College, and doctor of science from Dartmouth College. He received the medal of 1883 from the Société Industrielle de Mulhouse of Alsace, Germany, for his work on mill construction; the John Scott medal of Philadelphia for the preparation of the first insurance rules providing for the installation of electric light apparatus in 1885; and the association medal of the National Association of Cotton Manufacturers in 1910 for his "Bibliography of the Cotton Manufacture."

GEORGE L. R. FRENCH, '84, who has been chosen by the management of the Rutland Railroad to become its general superintendent is a graduate of the Massachusetts Institute of Technology. In 1885 he entered the service of the Chicago, Burlington & Quincy Railroad as rodman in the engineering department and after a few years' experience on location and construction of new lines entered the operating department as roadmaster and trainmaster. In 1890 he entered the service of the Boston & Maine Railroad as assistant engineer of the St. Johnsbury & Lake Champlain and Passumpsic divisions. In one year he was transferred to the Southern Division as roadmaster, and then to the Eastern Division in charge of maintenance of way during a period of extensive improvements in roadway and yard facilities. In 1903 he was appointed assistant superintendent of the Connecticut & Passumpsic Division in charge of the operation of the line between Springfield and White River Junction, and in 1907 was appointed superintendent of the Terminal Division at Boston.

AUSTIN WILLARD LORD, '88, has been chosen director of the School of Architecture in Columbia University and will begin his duties at the opening of the next academic year. He is one of the best known architects of York New City and is a member of the firm of Lord, Hewlett & Tallant, with which he will continue. Mr. Lord had long training in the offices of architects in the East and the West. At the Institute he gained the Rotch scholarship. For two years he was the director of the American School in Rome, founded by Charles F. McKim.

HOLLIS GODFREY, '98, was given the degree of doctor of science at the recent commencement exercises of Boston University.

H. S. MORSE, '03, has been appointed engineer in charge of the Division of Sewerage Investigations, Designs and Plans Department of Public Service, of the city of Cincinnati, Ohio. Mr. Morse is a graduate of the Institute and for a number of years was with United States Reclamation Service on the Lower Yellowstone Irrigation Project. Later he was resident engineer in charge of construction for the Sewerage Commissioners of Louisville, Ky. The city of Cincinnati is about to spend \$125,000 on a comprehensive sewerage investigation.

J. B. STODDER, '99, has been made steam railroad inspector by the Public Service Commission of the state of New York. Since leaving the Institute Mr. Stouder has been connected with the maintenance departments of the New York Central & Hudson River, the Boston & Maine, Chicago & Northwestern, Missouri Pacific, and the Delaware & Hudson River Railroad companies.

ARTHUR I. KENDALL, '00, has been appointed professor of bacteriology at the Northwestern University, Evanston, Ill. Dr. Kendall received his degree of doctor of philosophy from Johns Hopkins University. He was formerly chief of the board of health laboratory at Ancon, Canal Zone.

H. S. PHILBRICK, '06, has been appointed professor of mechanical engineering at the Northwestern University, Evanston, Ill. Since his graduation he has been assistant professor of mechanical engineering at the University of Missouri.

RUSSELL PORTER, '98, will accompany Henry G. Bryant, president of the Geological Society of Philadelphia, to Labrador, where they will make exploration of the southwestern part of that land which is at present unknown to science. Headquarters will be established at the mouth of the St. Augustine River near the settlement of Dr. Grenfell. From this point they will start with Indian guides upon their long trip through the barren wastes. Mr. Porter was a member of the relief expedition which brought back Peary from his first trip to Greenland. He made two trips to Franz Joseph Land, staying there two years, and accompanied the Baldwin-Zeigler expedition to Greenland, and another Zeigler expedition to the Arctic regions.

ELECTRIC VEHICLE RESEARCH AT TECH

Under the auspices of the Boston Edison Company the electrical engineering department of the Massachusetts Institute of Technology has completed the first of a series of researches into the economics of merchandise transportation in metropolitan districts and has tabulated the data obtained for early publication in a bulletin. Lack of definite information concerning costs is one of the most serious drawbacks in connection with the preparation of constructive estimates dealing with highway transportation, and the material gathered at Boston during the past year represents a systematic effort to overcome this obstacle. Without going into detail, which may be studied at leisure as soon as the bulletin appears, the plan of research and scope of results attained deserve more than passing mention.

The department's analysis rests upon the collection of cost and operating data from a large number of sources, the names of the co-operating organizations being withheld, although the fullest discussion of conditions and the freest interpretation of results have been encouraged. Special efforts have been made to secure complete information regarding the performance of horse-drawn electric and gasoline trucks, taking into account time lost in standing still, average speeds of running, daily mileage, service interruptions, influence of delays, radius of action, loads, capacities, and character of service handled. Cost data assembled cover fixed charges, running expenses and maintenance disbursements for the several types of vehicles, including records derived from the operation of 83 electric trucks of from 500 to 7000 lb. capacity, 14 gasoline trucks of from 500 to 10,000 lb. rating, and 39 horse-drawn vehicles.

From the detailed data two preliminary estimates have been prepared covering the cost of parcel delivery and the cost of coal delivery under stated conditions, the estimates being only tentative, but in any event suggestive as to the items which must be considered in order to arrive at the probable cost of operation. In each of the cases the electric truck shows the lowest cost per delivery and the lowest cost per mile, taking account of all charges;

it is hardly likely the figures would be given out under such auspices otherwise, in fact. In the parcel delivery service, the conditions specified were an average maximum load of 1000 lbs., three trips per day, four deliveries per mile, 9 hours' work per day, 45 minutes per trip for loading and 1 minute per delivery. The total cost per mile, all expenses of every kind being included, was 21.5 cents for the electric machine, 26 cents for the gasoline outfit, and 23.5 cents for the horse-drawn service.

The estimated cost of coal delivery service, deduced from the general data obtained, covered the work of a 5-ton electric truck, a 5-ton gasoline outfit, and a 2-horse wagon, with three horses owned. The average maximum load was 5 tons, the average distance covered per trip, 7 miles, 9 hours' work per day, and 1 hour's allowance per trip for loading and unloading. The cost per delivery came to \$3.32 for the electric truck, \$4.07 for the gasoline machine and \$3.91 for the horse-drawn equipment, the costs per mile being respectively 47, 58 and 55 cents. In each instance the horse-drawn equipment performs but from half to two-thirds the work of the motor trucks. An interesting feature of the study is the influence of service requirements upon the cost of operation. The cost per delivery in the cases of the lighter equipments for parcel service is increased from 22 to 28 per cent. in cases where the time allowed per stop is 2 minutes instead of 1.

The investigation already has gone far enough to emphasize the economic importance of every detail of the service rendered by competitive transportation agencies and the necessity of complete information before any general conclusions can be drawn. It is probable that the Boston research is the most comprehensive thus far undertaken in the electric vehicle field, and as the material and deductions gained are highly significant to public utility companies engaged in the marketing of electrical energy at off-peak hours, it is cause for congratulation that the investigation is to be carried still further. It illustrates in a marked degree the possibilities of co-operation between the engineering school and the field of commercial industry, and in carrying the work forward the electrical engineering department of the Institute at Boston desires to get in touch with all persons interested in any phase of commercial vehicle operation.—*Engineering Record*.

TECH'S LATEST ACQUISITIONS

There will be quite a little Washington in the New Technology-by-the-Charles if President Maclaurin keeps making his selections for professors from the groups of strong men that the great public departments have assembled at the national capital. Lindgren it was a fortnight ago, chief geologist of the United States, who comes to Boston in the reorganization of the department of geology made necessary by the establishment of the Volcano Observatory in Hawaii and the placing of Dr. Jagger in charge of it, and today there is announced the appointment of James Knox Taylor to the department of architecture. Taylor is easily one of the most important men in Washington; his position, technically termed supervising architect to the Department of the Treasury, is of greatest importance, the expenditures amounting to more than \$10,000,000 a year, and in this position he has proved his efficiency. Thanks to a businesslike Tarsney act, the structures that the Government now erects in the various quarters of this country have gone out of the control of an autocrat against whose decision there was no appeal, and the country may now have, and, in fact, does have, the aid and assistance of the most skilled firms in the business, through methods of competitive selection. To the enactment of the act Mr. Taylor gave his sympathy, and under its provisions the places in which the Government officials attend to their official duties have improved, till in their quality, according to one eminent expert, they are comparable to the kindred structures in Europe.

In his administration of the duties of his office Mr. Taylor has been so active and progressive that he has been termed "the national architect," and no less an authority than McKim noted some time ago that his retirement from his office, then contemplated, would be "a national calamity." In this work he has had the opportunity that has presented to him most important business relations with all the great architects of the United States. He has amassed a wealth of information of what is doing in this busy country. And now this wealth of experience is to be placed at the service of Technology. He will fill in most effectively whatever

inevitable gaps there may be between the rapidly moving world and the systems of instruction, and his work, it is understood, will be to make of the young architects men already instructed in knowledge of architectural business methods.

And as for Professor Waldemar Lindgren there is probably not in the country his equal in the line of practical economic geology. Geology is no longer simply the study of fossils and formations, nor does it remain merely as a measure of the value of mines. It enters into a hundred other fields today—in the determining of the practicability of engineering projects, in the conservation of water and other supplies, in the determination of valuable or necessary ingredients of the soil for farming purposes, or the development of earthy products, like cement, that are not metals. Each of these in all its variations is a field for the geologists of the future. Rogers when he established the Massachusetts Institute of Technology knew what was coming, for he was himself the leading economic geologist of the country, and today the Institute recognizes the widening field, and invites a logical successor to Rogers in his own specialty to join the goodly company already assembled on Boylston street. And at the same time there should not be overlooked the modest laboratory at which Dr. Jagger will direct the energies, undertaking, as has been possible nowhere else in the world, the study of volcanic activity of the most active kind. Thus far in the world's story of fire, flood and earthquake there has been uttered but the fatalistic "kismet." Now active thinkers say: "Avoid fire, conserve the water and prevent the flood, study the earthquake and volcano, mark their zones of danger, and eliminate the danger by keeping out of its way." And in the patient gathering of facts whereby the habits of earthquakes and volcanoes may be known Dr. Jagger has undertaken a long-to-be-continued exile from his native land in the companionship of the mightiest crater that the earth's crust affords.—*Boston Transcript*:

New Register of Former Students Out

The new Register of Former Students has just been issued from the press and may be had upon application. It contains over 2,000 more addresses than that of 1909.

NEW MEMBERS OF THE ALUMNI ASSOCIATION

The following former students were elected members of the Alumni Association on the dates indicated:

May 1, 1912: William Newell Bannard, '70; Harry Albertus Brown, '94; William F. Dawson, S.M.A., '86; William C. Dickinson, '70; Otis Dwight Fellows, '04; Leroy G. Fitzherbert, '11; Charles E. Fox, '91; Cass Gilbert, '80; Homer Goodwin, '91; Robert Stavely Hamilton, '04; Parker H. Kemble, '95; Louis Chappell Newhall, '91; Tom William Osgood, '05; C. Barton Pratt, '91; Redfield Proctor, '02; Joseph Warren Revere, '68; Miles S. Richmond, '99; Charles Henry Stephenson, '79, S.M.A.; Solomon Sturges, '87; Clarence Edgar Whitney, '91; Benjamin Franklin Wilson, Jr., '89.

May 16, 1912: Mitchell Allen, '10; Newton Mitchell Anderson, '82; Henry Alexander Baldwin, '94; George Oliver Bassett, '92; Sophie Thayer Blunt, '03; Guy Willard Bolte, '10; Arthur Austin Brigham, '78; Albert Knowlton Comins, '09; Robert W. Daniels, '03; Carroll Smith Dunphe, '89; George R. Eckel, '05; Raymond Wesley Egan, '10; Wilson Eyre, '79; Orlando K. Foote, '80; Ralph Kay Forsyth, '05; Augustin Frigon, '11; Samuel Stinson Gannett, '83; Michael Joseph Golden, '94; Alfred Hague, '10; Ralph Herman Hannaford, '10; William Carl Haseltine, '96; Frank Herbert Hill, '10; Robert Howe, '06; Henry Vincent Hubbard, '00; Walter F. Hudson, '08; Frank Failey Hutchings, '07; Frank Baldwin Jewett, '03; Arthur A. Johnson, '99; Horace Johnson, '01; Allen Jones, Jr., '09; Thomas Moore Hamilton, '03; Walter Francis Hudson, '08; Warren I. Keeler, '07; John Elliott LeVosquet, '01; David Mason Little, '80; George Hall Lukes, '92; L. Richards McMillan, '11; Frederick Oren Miller, '02; Charles Henry Muhlenberg, '92; Joseph Otis Osgood, '77; Frank Amos Page, '80; Alvin L. Peabody, '06; Theodorus Polhemus, '11; Myron P. Potter, '00; Richard H. Rich, '95; Daniel W. Richards, '95; Seymour M. Rivitz, '05; Albert A. Roberts, '05; William F. Rockwell, '03; Fred H. Stafford, '72; Tadasuka (Chinsuke) Suyehiró, '05; Humphrey H. Swift, '92; William Lyman Underwood, '02; Henry Matson Waite, '90; John Murray Walker, '02; Howard David Williams, '11; Edwin Sheldon Worden, '00.

LOCAL ALUMNI FUND CHAIRMEN

The chairmen of local committees of the Alumni Fund have been appointed in practically every important geographical center. In some cases the field is a very large one and it may seem desirable later on to split it up into smaller districts.

The list at the present time stands as follows:

AKRON, O.	Paul W. Litchfield, '96...	38 Marshall Ave.
COLUMBUS, O.	John S. Bleeker, '98....	Columbus R.R., Co.
BIRMINGHAM, ALA.	M. R. Scharff, '09....	1140 Brown-Marx Bldg.
BUFFALO, N. Y.	Willard H. Watkins, '95..	P. O. Box 57.
BALTIMORE, MD.	Edwin F. Samuels, '99...	Maryland Trust Bldg.
CINCINNATI, O.	Stuart R. Miller, '07....	3366 Morrison Ave., Clifton, Cincinnati, O.
CLEVELAND, O.	Franklin B. Richards, '84	617 Perry Payne Bldg.
CHICAGO, ILL.	F. K. Copeland, '76....	122 So. Michigan Ave.
COLUMBUS, O.	Frank E. Sanborn, '89...	90 Fourteenth Ave.
DALLAS, TEXAS.	C. W. Kellogg, Jr., '02..	Wilson Bldg.
DENVER, COLO.	Frank E. Shepard, '87...	P. O. Box 1802.
DETROIT, MICH.	Marvine Gorham, '93....	170 McDougall Ave.
HARTFORD.	R. J. Ross, '06....	City Engineer's Office.
HAWAII.	Norman Watkins, '98....	P. O. Box 767, Honolulu.
INDIANAPOLIS, IND.	Kurt Vonnegut, '08....	630 East 13th St.
JAPAN.	Dr. Takuma Dan, '78. .	344 Awoyama Harajiku, Tokio.
KANSAS CITY, MO.	Henry F. Hoit, '97....	315 East 10th St.
LOWELL, MASS.	Edward B. Carney, '93 ..	Lowell Inst'n for Savings.
LOS ANGELES, CAL. . .	Samuel Storrow, '90....	908 Wright & Callender Bldg.
MAINE.	Abel M. Hamblet, '02 ...	Rumford, Me.
MANILA, P. I.	William B. Poland, '90 ..	Philippine Railway Co.
MILWAUKEE, WIS.	Harry H. Cutler, '81....	Cutler Hammer Mfg. Co.
MINNEAPOLIS, MINN. .	William H. Bovey, '94....	Care Washburn-Crosby Co.
NEW BEDFORD, MASS. .	Charles F. Wing, Jr., '99.	36 Purchase St.
NEW HAMPSHIRE.	Thomas W. Fry, '85....	Claremont, N. H.
NEW YORK CITY.	G. F. Shaffer, '10....	17 Gramercy Park.
PITTSBURGH, PA.	Sumner B. Ely, '92....	5122 Pembroke Place.
PHILADELPHIA, PA. ...	Col. David A. Lyle, '84..	St. Davids, Del. Co., Pa.
PROVIDENCE, R. I.	Eleazer B. Homer, '85 ...	72 Weybosset St.
PITTSFIELD, MASS.	Charles W. Power, '89....	W. E. Tillotson Mfg. Co.
PORTLAND, ORE.	Hudson B. Hastings, '07.	526-20 Street.
ROCHESTER, N. Y.	William E. Hoyt, '68....	50 Westminster Road.
SCHENECTADY, N. Y. .	Willis R. Whitney, '90...	General Electric Co.
SYRACUSE, N. Y.	Walter E. Hopton, '91...	311 Summit Ave.

STEELTON, PA.....	Frank D. Carney, '87....	Pa. Steel Co.
SAYANNAH, GA.....	George J. Baldwin, '77..	National Building.
ST. LOUIS, MO.....	John L. Mauran, '89	46 Vaudeventer Place.
SPOKANE, WASH.....	P. F. Kennedy, '07.....	811 E. Mission Ave.
SPRINGFIELD, MASS...	George C. Gardner, '88 ..	33 Lyman St.
SAN FRANCISCO, CAL..	John J. Donovan, '06....	Care Palmer & Hornbostel, Oakland, Cal.
SEATTLE, WASH.....	Geo. B. Harrington, '04..	Seattle Electric Co.
TACOMA, WASH.....	George W. Rounds, '89 ..	Tacoma Ry. & Power Co.
VERMONT.....	Redfield Proctor, '02	Proctor, Vt.
WASHINGTON, D. C...	Dr. Robt. B. Sosman, '04	Carnegie Institution Geo- physical Laboratory.
WILMINGTON, DEL....	Joseph Bancroft, '98	Joseph Bancroft Sons Co.
WORCESTER, MASS....	Albert S. Heywood, '92 ..	70 Winter St.

Dr. Sedgwick on College Development

Prof. William T. Sedgwick addressed the alumni meeting at the recent Yale commencement speaking for the class of '77 and for the scientific department in general. The New York *Sun* says he struck a new note in the discussion by advocating the establishment at Yale of a series of colleges similar to the English plan under one university. He said that he was opposed to the absorption of the Sheffield Scientific School by Yale College, as had been done by Harvard in the case of the Lawrence Scientific School. He favored the further expansion of Yale by developing within it other colleges and added:

"The 92,000,000 people in this country are going to want vast educational institutions and why not follow out the lines of the English universities and coördinate other departments in the way Yale has done with the scientific department? Then if a man has two, three, or six millions of dollars that he wants to put into a college and which would not be adequate to endow a successful separate institution he could establish, say, a college of philosophy at Yale, or a college along some other line. There would thus be built up here at New Haven a great American university with each college maintaining that independence which is so valuable an asset of the small college and yet all under the one general university."

CONSTITUTION OF THE ALUMNI ASSOCIATION

The constitution and by-laws of the Alumni Association have been revised from time to time during the last two years, but no publication of them has been made during that time.

They are presented herewith and will soon be published in separate form and forwarded to members of the Alumni when other literature is being sent out.

CONSTITUTION

ADOPTED 1909

Printed July, 1912

ARTICLE I

This organization shall be called the Alumni Association of the Massachusetts Institute of Technology. Its object shall be to further the well-being of the Institute by fostering the interest of its members in the school and in each other.

ARTICLE II

Revised May 22, 1911

MEMBERSHIP

SECTION 1. The Association shall consist of regular and honorary members.

SECT. 2. The regular membership shall consist of all persons who have received a degree from the Institute, and of such other persons as may be duly elected by the Executive Committee who have been connected with the Institute as students in any class already graduated, or the former School of Mechanic Arts.

SECT. 3. Any present or former member of the Corporation or of the Faculty of the Institute may be elected an honorary member by the Executive Committee of this Association.

SECT. 4. Honorary members shall be entitled to all privileges of regular members, except that of holding the elective offices in this Association specified in Article III, Sections 1, 4 and 5.

ARTICLE III

OFFICERS, COMMITTEES, ETC.

SECTION 1. The officers of this Association shall be as follows: There shall be President, two Vice-Presidents, and a Secretary-Treasurer, who, with four other members, shall constitute an Executive Committee.

The President and Secretary-Treasurer shall be elected for one year, the Vice-Presidents and members at large of the Executive Committee for two years.

One Vice-President and two members at large of the Executive Committee shall be elected annually.

SECT. 2. There shall be a Council composed of the five latest living ex-presidents, ten members elected at large, and one representative from each graduate class and from each local organization which is given representation by the Executive Committee. The officers mentioned in Section 1 shall be members of the Council.

The ten members at large shall be elected for terms of two years, five being elected each year. Representatives of classes shall be elected for terms of five years, and representatives of local alumni organizations for one year.

SECT. 3. Whenever the Executive Committee shall so approve any local alumni organization (having its headquarters not less than twenty-five miles from Boston), certifying to a membership which includes twenty-five or more members of this Association, shall be given representation in the Council.

SECT. 4. (Revised 1910.) There shall be a Nominating Committee of nine members chosen by the Council to serve for a term of three years, three members being elected each year at the regular annual meeting of the Council. No member of this Committee shall be eligible for re-election within a period of three years after the expiration of his term of office.

The Secretary-Treasurer of the Association shall act as Secretary of the Nominating Committee.

In the year 1910 there shall be chosen by the Council a Nominating Committee of nine members, three to serve until the annual meeting of 1911, three to serve until the annual meeting of 1912, and three to serve until the annual meeting of 1913. This paragraph shall be stricken from the Constitution after the annual meeting of 1913 unless it be repealed before that date.

SECT. 5. There shall be a Committee on Permanent Funds consisting of three members of the Association, one of whom shall be elected by the Council each year at the annual meeting thereof by written ballot for a term of three years, and until his successor shall have been elected and shall have qualified.

In the year 1910 there shall be elected by the Council a Committee of Three on Permanent Funds, one to serve until the annual meeting of 1911, one to serve until the annual meeting of 1912, and one to serve until the annual meeting of 1913. This paragraph shall be stricken from the Constitution after the annual meeting of 1913 unless it be repealed before that date.

SECT. 6. (Adopted April 28, 1910.) There shall be appointed by the President, not less than one month before the annual meeting each year, two members of the Executive Committee to act as

auditors. They shall examine the books of officers and committees holding funds of the Association, and they shall report, at the annual meeting, in writing, the result of their examinations.

SECT. 7. Other standing committees may be provided for under the By-Laws, and special committees may be appointed or elected by the Council as occasion requires.

ARTICLE IV

ELECTIONS

SECTION 1. The officers of this Association and others holding elective positions referred to in Article III, and candidates for election to the Corporation, shall be chosen by letter ballot.

SECT. 2. Only members of this Association are privileged to vote for representatives of classes or representatives of local alumni organizations.

ARTICLE V

DUTIES OF OFFICERS

SECTION 1. The duties of the President, Vice-Presidents and Secretary-Treasurer shall be those commonly pertaining to their offices. They shall perform the same duties for the Council.

SECT. 2. (Revised 1911.) The Executive Committee shall look after the general interests of the Association, shall have power to fill all vacancies arising among officers or committees elected by the Association, shall have full charge of balloting, shall pass upon all applications for membership in the Association, and shall have charge of the office and routine work of the Association. It shall also be the Executive Committee of the Council.

SECT. 3. The Council shall act as the representative of this Association in the consideration of all matters not otherwise delegated.

At the request, in writing, of any twenty-five members of the Association, the Council shall consider any matter pertaining to the general welfare or work of the Association, make recommendations thereon, and, if so requested, shall, through the Executive Committee, poll the Association by letter ballot,—said ballots to be mailed within thirty days of receipt of such request.

SECT. 4. The duties of the Nominating Committee shall be to present through the Secretary nominations for all offices to be filled, for members at large of the Council and nominations of candidates for election to the Corporation.

SECT. 5. (Adopted 1910.) The Committee on Permanent Funds shall have the sole custody and management of all trust or permanent funds now or hereafter held by this Association, or by any of the committees, officers or agents thereof, and may make such investments thereof separately or jointly with other of said funds as they may deem proper. The net income thereof shall be expended by them in the manner and for the purposes provided in the establishment of the respective funds, and in the absence of

such provision shall be paid by them to the Secretary-Treasurer of this Association, to be expended by him as the Council of this Association shall direct.

Upon election they shall signify their acceptance of office in manner and form satisfactory to said Council, and shall thereupon file with said Secretary-Treasurer such bond as the said Council may direct, and shall annually render to the said Council an account setting forth the amount, management and disposition of all property real and personal under their control.

ARTICLE VI

MEETINGS

Meetings of the Association may be called at any time by the Executive Committee, and shall be so called at the request, in writing, of any twenty-five members of the Association.

ARTICLE VII

AMENDMENTS

This Constitution may be amended at any time by letter ballot. Proposed amendments, either indorsed by the Council and approved by the Executive Committee or indorsed by fifty members of the Association, shall be sent by the Secretary to all members of the Association, with notice of the time of closing the polls, which shall be not less than thirty days from the date upon which the notice of proposed amendment is sent out.

In order to be counted, a vote for or against the proposed amendment must be returned to the Secretary, enclosed in an envelope indorsed with the voter's signature and class. The Executive Committee shall thereupon canvass all ballots and announce the result. A proposed amendment receiving less than two-thirds of the total votes cast, or less than two hundred votes, shall be lost.

BY-LAWS

ARTICLE I

ELECTIONS

SECTION 1. (Revised 1910.) Prior to October 10 the Nominating Committee shall transmit to the Secretary nominations for the offices to be filled and nominations for term members of the Corporation of the Institute. The nominations for election to the Corporation shall be at least double the number of places to be filled. The Secretary shall publish the nominations transmitted by the Nominating Committee in at least one daily paper in the city of Boston before October 15. Additional nominations for any office or for election to the Corporation, signed by at least thirty members of the Association entitled to vote for such nomi-

nees, shall be placed on the official ballot by the Secretary if received by him before November 5.

SECT. 2. Prior to November 20, letter ballots containing the names of all candidates shall be sent by the Secretary to all members of the Association entitled to vote for such candidates. In order to be counted, a ballot must be returned to the Secretary, enclosed in an envelope indorsed with the voter's signature and class. The polls shall close December 20, and the Executive Committee shall thereupon canvass all ballots and announce the result. The candidates receiving the largest number of votes shall be deemed elected. Should there be a failure to elect on account of a tie, the tie shall be resolved by lot drawn by the Secretary.

SECT. 3. (Revised 1910.) At least thirty days before the March meeting of the Corporation, the Secretary shall send to the Nominating Committee of the Corporation the names of the candidates receiving the largest number of votes for election to the Corporation, in number the same as the number of places to be filled.

SECT. 4. If any vacancy occurs among the term members of the Corporation through death, resignation or otherwise, the Alumni Association shall choose for each vacancy a candidate according to the provisions of section 2 of this Article.

SECT. 5. (Revised 1910.) Only members of the Alumni Association whose class has been graduated at least five years shall be entitled to vote for term members of the Corporation.

SECT. 6. Nominations for representatives to the Council shall be made by the organizations which they represent, but the Executive Committee shall have charge of all balloting for election thereof.

SECT. 7. For the first year of the Council the ten members at large shall be elected, five for a term of one year and five for a term of two years, and the representatives of classes whose years end in 1 or 6, 2 or 7, 3 or 8, 4 or 9, and 5 or 10, shall be elected respectively for one, two, three, four, and five years. The provisions in Sections 1, 2 and 3 of this Article shall not apply in the case of nomination and election of these members and of the first set of representatives of alumni organizations, but all matters relating thereto shall be in the hands of the Executive Committee.

Committees already elected by this Association shall continue for the terms for which they were chosen or until their successors are chosen by the Council.

This section shall become void when its provisions have been carried out.

ARTICLE II

BRANCH ASSOCIATIONS

Any ten former students of the Institute residing in a given locality may form a local alumni organization, which, upon

approval of the Executive Committee, may be enrolled as a branch association, providing, however, that not more than one such organization shall be recognized in any one district. Lists of members, with addresses, shall be annually sent to the Secretary by each branch organization.

ARTICLE III

MEMBERSHIP

SECTION 1. Applications for the election of non-graduates to membership in the Association shall be submitted in writing to the Executive Committee. The names shall be voted upon by ballot, and the affirmative votes of a majority of the entire Executive Committee shall be necessary to elect. The names of those elected shall be published by the Secretary in the official organ of the Association.

SECT. 2. The Secretary shall notify each elected member whose dues have remained unpaid for three consecutive years, such notice to be sent by mail to the member's last-known address; and if, at the expiration of thirty days after sending such notice such dues are still unpaid, such membership shall be forfeited. The Executive Committee may, however, at its discretion, reinstate such persons upon the payment of all arrears.

ARTICLE IV

MEETINGS

The annual meeting of the Council shall be held in January. Special meetings may be called at any time by the Executive Committee, and shall be so called at the request, in writing, of ten members of the Council.

ARTICLE V

COMMITTEES

The Council shall have power to appoint standing committees not otherwise provided for in the Constitution or By-Laws.

ARTICLE VI

DUES

SECTION 1. (Revised 1911.) The annual dues for all except honorary members shall be \$1, and with subscription to the TECHNOLOGY REVIEW, \$2.

SECT. 2. (Revised 1911.) The payment of \$50 at any one time shall exempt any member from further payment of dues, and the Treasurer of the Committee on Permanent Funds shall pay each year to the Treasurer of the Association, \$1 for the subscription of such a member to the TECHNOLOGY REVIEW so long as it is the official organ of the Association.

ARTICLE VII

Revised 1911

OFFICIAL ORGAN

SECTION 1. The TECHNOLOGY REVIEW shall be the official organ of this Association, and its editorial management and publication shall be vested in the Council.

SECT. 2. Members not in arrears shall be entitled to receive all publications of the Association.

ARTICLE VIII

AMENDMENTS

These By-Laws may be amended at any time by a majority vote of the full membership of the Council, provided thirty days' notice of such amendment has been given through publication in the REVIEW.

PUBLICATIONS OF THE INSTITUTE STAFF

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spectus*. Vol. 1, pp. 120-123 (pp. 3). Illustrated. Size 8vo.
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REGINALD A. DALY. Magmatic Differentiation in Hawaii.
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47-122 (pp. 75). Illustrated 5 pls. Size 8vo. 1911.

REGINALD A. DALY, W. G. MILLER and G. S. RICE. Report
of the Commission appointed to investigate Turtle Mountain,
Frank, Alberta. Memoir No. 27. Geological Survey of Canada.
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LOUIS DERR. A comparison of Methods of making Lantern
Slides. *Photo-Era*. Vol. 28. pp. 70-2. (pp. 2) Illustrated.

LOUIS DERR. A curious Photograph of Lightning. *Photo-Era*.
Vol. 28, p. 113 (pp. 1). Illustrated. 1912.

LOUIS DERR. Review of Kimball's College Textbook of Phys-
ics. *Amherst Graduates Quarterly*. Vol. 1, pp. 254-5 (pp. 2).

SELSKAR M. GUNN. Educational and Publicity Work of the
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waukee, Wis. Bulletin No. 15. February, 1912.

SELSKAR M. GUNN. Control of Communicable Disease by the
Health Department. Bureau of Economy and Efficiency, Mil-
waukee, Wis. Bulletin No. 18. April, 1912.

SELSKAR M. GUNN. The Milk Supply of Milwaukee and its
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Vol. 1, No. 5 pp. 369-372. May, 1911.

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FREDERICK G. KEYES. The Dissociation Pressure of Sodium and Potassium Hydrides. *Journal of American Chemical Society*. Vol. 34, pp. 779-788 (pp. 10).

F. A. LAWS. Report to Board of Car and Electric Light Commissioners on Maximum Demand Indicators in use by the Edison Electric Illuminating Company of Boston. Appendix A in *Public Document House 1672*. pp. 19. Size 9" x 5 $\frac{3}{4}$ ". Illustrated.

JOSEPH LIPKE. Reviews of Recent Work on the Proof of Fermat's Theorem. Bulletin of the American Mathematical Society, Vol. 18. p. 194. (pp. 4) January, 1912.

JOSEPH LIPKE. Natural Families of Curves in a General Curved Space of n-Dimensions. Transactions of American Mathematical Society. Vol. 13, p. 77 (pp. 19). January, 1912.

G. F. LOUGHLIN. The Gabbros and Associated Rocks at Preston, Conn. Washington, D. C. U. S. Geological Survey, Bulletin 492. (pp. 158) 14 pls., 18 text. figures. Size 9 x 6 in. 1912.

W. V. LYON. Discussion of American Institute of Society of Electrical Engineers' papers.

H. H. MARVIN. The Selective Transmission and the Dispersion of the Liquid Chlorides. *The Physical Review*. Vol. 34, p. 161. (pp. 26.) Illustrated Figures. March, 1912.

A. A. NOYES. A System of Qualitative Analysis for the Common Elements. *Journal of American Chemical Society*. Vol. 34. p. 609 (pp. 35).

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Treasurer. Boston. Vol. 47, No. 2., p. 152. Size 8vo. January, 1912.

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M. I. T. Bulletin of the M. I. T. Summer Surveying Camp. Boston: Vol. 47 extra. p. 8. Size 8vo. May, 1912.

M. I. T. Bulletin of the M. I. T. Register of Former Students. Boston: Vol. 47, No. 3; p. 536. Size 8vo. March, 1912.

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MISCELLANEOUS CLIPPINGS

Of all the radiant things which nature, art and good friends have lately showered upon the Institute of Technology the very latest is Lydia Island, a fourteen-acre emerald gem in the upper waters of Buzzards Bay. This admirable new gift comes by way of one of the most admirable ancient gifts that Tech ever had, the class of '85. Classes in a university are as individual as men; each has its predominating characteristic; '85 has always been noted as a hustler, a unifier and a distributor of energy. So it was even in its undergraduate days. In those early ages the Institute had not fully found itself. As a social entity it was but a formless void, mighty in possibilities no doubt, but without definition. Then came along the class of '85 and it seemed to have in it something that induced precipitation. It was the first crystal that came out of the saturated social solution. The members of the class early learned that they must hang together, or as Sam Adams so aptly remarked, they would hang separately. In sophomore days no doubt many of them deserved separate suspension, but they hung together, and this the class has done ever since. On it and through its influence has crystallized since then much of the real university spirit which permeates the Institute today, whereby it stands on the threshold of very great things.

THE MEANING OF AN ISLAND

But to return to Lydia Island, as no doubt Tech men will return to it again and again as the years go by. This island has formally been tendered to the class of '85 by one of its members, Frank H. Page of Springfield, Mass., without restriction except that the class build a suitable clubhouse thereon and that this and its surroundings be used for outing purposes by the club to be formed of Tech men, of which the class is to be again, as it always has been in Tech social history the nucleus of crystallization.

Seen in the witchery of its June foliage the island itself is well worth returning to. Its fourteen acres of clean Cape Cod sand round gently into a moderate elevation, well wooded with pitch pine and white oak, standing in the midst of the blue waters of Onset Bay, at the upper extremity of Buzzards Bay. Onset is just a short distance across the water from its northern shore, and the place is an island in truth only by courtesy of high tides. At ordinary sea levels it is attached to Burgess Point, the southerly part of East Wareham, by a green marsh. On the northerly shore at present are a few fish houses, occupied during the fishing season by oyster men, who find their catch in the waters just off shore. The island is so near civilization that undergraduates who in the future use it will find it an easy row to the social gayeties of Onset; while south and west on the main land are the fine estates of more exclusive summer colonists. Yet it is secluded, and there reigns upon it now a gentle peace whose occasional complete fracture ought to cause joy in the hearts of any collection of college graduates. It has ample room for commodious club buildings, tennis courts, etc., while on the adjacent mainland is a fine opportunity for golf links. There is deep water yacht anchorage just off its shore. In short Lydia Island is a pearl of the sea set on a silver strand washed by the warm

waters of one of the most beautiful little bays on the shore south of the Cape. A road can readily be built to it across the marsh from the mainland, making it approachable from Tech by automobile—or the water wagon—over splendid roads all the way from Boston.

THE BOOMSTERS OF '85

The class of '85 in formally accepting this gift appointed a committee, consisting of the class president, General William E. Spaulding of Nashua, N. H., Frank H. Page of Springfield, the donor, Charles A. Brown of Salem, and Everett Morss and Isaac W. Litchfield of Boston, to take measures for incorporating the class that the gift might be thus legally held, and to plan the ways in which other Tech societies and other Tech men should be allied with them in the pleasures and responsibilities of the club. The clubhouse will be directly the work of '85, right therein the spirit of the class showing forth. E. B. Homer of Providence offers to do all engineering work without cost to the club. Horace Fraser of Boston will undertake the architectural designing on the same terms, and J. P. Harding of Springfield offers the interior decorations.

All this giving, receiving and planning took place last Saturday at the summer home of Frank Page at East Wareham, where the class had its annual reunion, in sight of the island. '85 has been long noted among the Tech classes for its "stunts." It was so noted in undergraduate years, in fact, though these did not then so often come to the notice of the world. It does things in original ways of its own, ways so enticing that they are apt to be adopted by other class organizations, to mutual delight and benefit. This year's reunion had promised to be a quiet one, as perhaps befits men whose ages reach the half-century mark. Yet in the very beginning of it the class had to have its little fling. After luncheon at the Westminster Friday noon it went in motor car procession to the new Tech site and there formally examined it, approved and accepted it in a manner that waked Cambridge echoes and also the Cambridge police, bringing them to look on in wonder, at a discreet distance. From their host's summer place in East Wareham the class inspected, approved and accepted the site of the Cape Cod Canal, an engineering proposition directly in line with the aims and equipment of Tech men, approving but postponing a suggested plan for doing the same at Panama. During the first half of the time of this reunion of the class the exercises bade fair to be original—for '85—by the very fact that they followed much the usual lines of class reunions of university men, many and mighty refreshments, including a clambake, land and aquatic sports and such matters; and then the class proved its ability to do the completely original thing by giving to itself and accepting for itself this fine piece of property and planning to use it for a new development of that social side of Tech life which is proving so useful to its serious side as a great technical school.

'85 METHODS

The class of '85, M. I. T., burst in full regalia upon the eye of a startled but pleased world in 1905 at Sherwood Forest, Squam Lake, New Hampshire, where on its twentieth anniversary it showed how light of foot and of heart the Tech man may remain, even when his years pass well into the forties. There for three days it waked the echoes of sophomore life and of the New Hampshire hills in what the metropolitan newspapers of the time characterized as "high jinks in middle life." The Log of Camp Walker, still reverently preserved in the archives of the Institute,

commemorates in picture and prose the doings of the time at which individuals in vain endeavored to disguise their personal characteristics from the eyes of wise classmates. One capitalist and president of a big Boston corporation appeared in long golden hair, a pretty white dress with pink ribbons and most astonishingly discreet pantalettes. A photograph of this nymph enjoying a high swing is still gazed upon in the class album with murmurs of admiring approval on reunion days. A director of Cooper Union in New York was an Oriental potentate whose gorgeous gown's long sleeves were said to be concealment places for bottles of beer. Probably a scandalous mistatement. A Tech publication editor wore the whiskers, garments and manner, especially the manner, of a stage Jew. Men distinguished in science and art, in business or literature appeared with bulbous artificial roses, whiskers of a past generation and garments and weapons never before modelled even in costumers' dreams, and they acted the parts which the clothes called for with artistic inconsistency. Here were high jinks in middle life indeed, the antics which the sophomore would like to engage in if he could know how, brought to full flower through the experience and understanding which middle life brings.

For all this mighty nonsense, Camp Walker was one of the best things for Tech that had ever happened. The university spirit crystallized and epitomized in the class spirit of '85, crystallized forthwith in the other classes, old and new, of the Institute and is bearing fruit in all sorts of ways that are for good. It is not to be said that '85 is responsible for all the aroused spirit of support and progress among the alumni of today which is making Tech the foremost institution of its kind in the world, but it has had a generous share in it. Since then '84 has held a great reunion in which one of its wealthy members got into the spirit of the thing, and decided to give half a million dollars to his alma mater. At a recent "electrical" dinner given by the Technology Club of Philadelphia, a couplet in one of the songs thus referred to this '84 donor.

You all have heard of Volta's pile, a pile that no one wants;
But if they'd let me choose a pile, I'd rather have duPont's.

SERIOUS PURPOSE BENEATH THE FUN

DuPont's pile is not equaled by that of any member of '85, perhaps is not greatly exceeded by the combined piles of the members of the class, but '85 stands first in the list of givers to the alumni fund in the number of men subscribing and is third in actual total subscribed. It is in this manner that the class spirit of those who were graduated from Tech twenty-seven years ago shows for the welfare of the Institute, its high jinks being but the foam that bubbles forth from the vitality sparkling in the clear depths below. The class works perennially for the good of the cause, always with this sparkling vitality, whether as an aggregation or through individuals; '85 men are prominent among those who have established the new Institute summer school at a beautiful spot at East Machias, Me., providing the entire scheme and handing it to the Corporation on a silver salver, so to speak. Alex McKim, architect, of '85, was the founder of the new big and still growing Technology Club of New York city, and so the legend might run on to multifarious activities and achievements by this class of high jinks, high voltage and high attainments.

The Squam Lake meeting at Camp Walker in 1905 was the first real crystallization of the college spirit in Tech. With the startling doings of '85 as a nucleus this spirit has since grown very great. This year every five-year class, beginning

with '72, to date, holds a reunion. In 1905 there were but eighteen alumni associations, now there are thirty-eight, the most recently formed being those of Hawaii and Utah. The foreign associations are, The Far East (Philippines), Hawaii and Japan. '85 does not claim to have been responsible for all this growth of the University spirit, but it certainly fired a shot at Squam Lake in 1905 that has been heard round the world and has emphasized the value of humorous tomfoolery in fixing attention on serious purposes which lie beneath them. Few class associations have ever been quite so well advertised, first through their own possible members, and by way of them to the general public.

INCREASING CLASS EFFICIENCY

At various periods throughout the year, periods which grow more frequent as the annual reunion time approaches, proclamations, " '85 Hustlers," as they have come to be called, come by mail to every present or possible prospective member of the class association. They are couched in the spectacular humor which marked the Camp Walker meeting as peculiarly its own, and they stir first a grin of appreciation, then an impulse, and finally an overwhelming longing to join the association that speaks through such verbal skyrockets. The sophomore in a man never really dies and when it reads " '85 Hustlers" it simply rises and takes possession. Hence men who spent perhaps but a year in actual time at the Institute have come loyally into the class of '85, and, with the proverbial ardor of new converts, are among its most earnest and valued members. Not only that, some of them step into the game and really do more hustling for their alma mater than has ever been done by the regular holders of degrees, though they are but foster children. In proof of this one may cite that the greatest single gift which Tech has received from a former student, was given by a man whose name does not appear among the regular graduates. As a matter of fact this benefactor ought to be an '85 man, but the spirit of hustle which this class has so successfully bred through induction in various other classes, caught him up in a regular chariot of flame and landed him in '84.

THE LYDIA ISLAND CLUB

The class of '85 plans to make Lydia Island the beautiful location of a first class club for outdoor recreation of Technology members. It is at the head of navigation in Buzzard's Bay. The Cape Cod Canal, about which in the future will cluster cities of great commercial and manufacturing importance, is not far off, a coming port of world's shipping. All about on the land is a beautiful country of the Old Colony region, every day becoming more and more of a summer resort. Fine estates, green fields, and cottage life of the better sort will be the immediate surroundings of the island for a century to come. It will offer an ideal opportunity for boating, bathing, and manly land sports of all kinds, such as Tech men, with the effervescent spirit of '85 in their hearts, at all times delight in. It should work for the future greatness and value of the Institute to the community, not only through the joy in hilarious sport which is always one of the surface indications when Tech classes get together, but through the deeper feeling of loyalty and service which is always present and which works out in firmer foundations for and greater exaltation of the alma mater.—*Boston Transcript*.

The Pratt bequest to the Massachusetts Institute of Technology is important in ways other than its obvious significance that business men realize the advantages

of well-furnished educational institutions. It is a home appreciation of the Institute which shows that Technology is not without honor in its own country, and that the courses that have attracted so many representatives of other nations to this city have not attained their excellence without impressing the fact on our citizens. A course in naval architecture lacks the spectacular features of some other courses, the greater part of the after life of the student must be inconspicuous compared with that of a great hydraulic engineer or a sanitarian who takes a bold stand in fighting disease. It is of the highest interest, therefore, to find so modest yet so important a study so munificently endowed. Professor Peabody's department has received gifts from different individuals that have enabled it to carry on such splendid research work as that of the *Froude* which is shortly to be supplemented by the model of the tugboat, now on the ways. These have, however, been the details of laboratory experiment generously supported; the Pratt benefaction of three-quarters of a million, quite soon to be available, means the establishment of a whole school with its buildings, independent in point of cost of the great New Technology. It will permit of the planning and construction of a plant that shall be in keeping with the other buildings of the Institute, complete in all items, which, like the New Technology itself, may be one harmonious whole instead of a piecemeal and incongruous assembling of separate elements. The Pratt School of Naval Architecture and Marine Engineering now need lack nothing that is essential in its planning.

To the Institute this gift means that the department of naval architecture need not draw upon the general resources for its construction and equipment; it means that the funds that yesterday would have been necessary for it may now be devoted to the uses of other departments.

The benefaction moreover establishes a new procedure at the Institute and for the first time the Institute will have for one of its elements a distinct school. It is of course a university in plan today in that the courses, while having the foundations in common, are quite specialized; the Pratt school will make this the more evident. The policy of establishing such schools will be welcome at the Institute, where thus far its only suggestions have been a few professorships like those in memory of Walker and Thayer. In that the present gift will draw attention to the advantages of foundations which will include a whole school, the Pratt bequest will be of the greatest benefit to educational institutions the country over.

Six millions to the Institute within about a year, most of it from unexpected sources like the present one, is, further, an extraordinary evidence of the interest of business men of the country in the development of technical education, and a very strong mark of approval of President Maclaurin and his administration.—*Boston Transcript*.

Three-quarters of a million to the Massachusetts Institute of Technology is the latest gift. It comes in recognition of a department—naval architecture—that is not spectacular; it comes from a man, a lawyer, the late C. H. Pratt, who was in no way connected with the Institute, and in whom no one suspected his deep interest in it. But it is the appreciation of a Boston citizen for a technical study that reflects the reputation of the school in foreign countries and in the higher circles here. The clustering of six graduates from the department in a single yard in Camden shows the esteem in which the school is held by practical business men,

while the governmental requirement that all naval constructors from Annapolis shall finish their studies at Technology is further testimony of appreciation.

The bequest of Mr. Pratt is a large one, and will serve to establish on the firmest basis a school that demands ample space and costly equipment, and it is of especial interest to note that in all probability the sum named can be furnished by the estate with such comparative quickness that the Pratt school of naval architecture and marine engineering may lay its plans with the other departments of the Institute among the buildings that presently are to rise beyond the Charles.

The Institute is certainly coming to its own, with the land, the gift of one unexpected donor; the buildings from another, who still hides his identity in the name Mr. Smith; and this department so splendidly provided by a third, as little anticipated as the others. Meanwhile the alumni, with their gifts for equipment, have passed the \$300,000 mark.—*Boston Post*.

To him that hath shall be given. It is said that the Massachusetts Institute of Technology has been blessed with a larger amount of money gifts in the last year or so than any other American educational establishment. Be this as it may, the gifts aggregate several millions, the latest being that of three-quarters of a million, provided for in the will of Mr. Charles H. Pratt of Boston, which was filed for probate on Friday. Mr. Pratt's money is to be used—at a future day—for a school of naval architecture and marine engineering, on condition that the trustees of the Institute erect a suitable building. This is contrary to the usual practice of donors—they are more likely to give a building and expect somebody else to find an endowment for it. Thus they insure the perpetuation of their name in the building, and the contributors to the maintenance fund remain obscure if not anonymous. The Institute of Technology deserves congratulations on the Pratt benefaction, and on the manner of it.—*Providence Journal*.

If the rhetoric about Japanese conquest were to concern itself with the triumphs of Japanese over American geologists, it would rest on a more solid basis of fact. The scientists of the whole world have, in fact, been in some respects surpassed by those of Japan in the study of seismology, and especially of volcanoes. It will be welcome news, therefore, to those more interested in the real warfare of peace than in imaginary "Yellow Perils," that there is to be an American volcano-observatory on American soil. The Massachusetts Institute of Technology has established such an observatory on Kilauea, in Hawaii. There Prof. Thomas A. Jaggar, Jr., and his assistants will conduct a study at first hand of the physical, chemical and geologic phenomena of that interesting volcano and of its neighbors, Mauna Kea and Mauna Loa. Special students and experts will be welcome for research work.—*N. Y. Evening Post*.

The gift of three-quarters of a million to the Massachusetts Institute of Technology for its department of naval architecture is an appreciation on the part of a citizen of Boston which reflects the reputation which this school has attained abroad. For a number of years the Oriental nations have appreciated what is being done here in the way of practical training and the making of what Mr. Edison has termed "unusual men," and students from Japan and China and even naval officers of rank have come to Professor Peabody for higher instruction.

The United States government has shown its appreciation in decreeing that its

naval constructors who have graduated from Annapolis shall have the polish of two or three years at Tech. Local yachtsmen have gone to the Institute for a scientific method of measuring their vessels, and one or two men have helped the department by gifts for research like that of the *Froude* the little vessel that has shown the larger ones how to wear their propellers.

The appreciation at home has, however, been modest in its nature, and this great gift, literally out of the blue, is evidence that the sons of Boston merchants of older fashion realize the need of maintaining the prestige of Boston as a school for builders of ships.—*Boston Post*.

All the good things said about the Massachusetts Institute of Technology by Thomas A. Edison and others is further attested by the high regard the United States government has for Tech. It is required at the present time that all naval constructors, officers in the United States navy, take a post-graduate course at Tech., the local institution being considered the best place for the officers to receive a thorough schooling in their chosen field.—*Boston Post*.

"Hall-mark of Technology" is the happy phrase coined yesterday at Commencement by President Maclaurin. The term has been used for highest qualities in silver and gold, it had remained for the President of the Institute to apply it to the even more precious acquisition of education. "You bear Technology's hall-mark," he said. "A signal honor that proves you to have measured up to its standards while here. You must in future measure up to the standards that the world has set for Technology men."—*Boston Transcript*.

I noticed at the meeting of the American Electro-Chemists at the Institute of Technology that these men, whose business is electricity, marvelled at the wealth of experimental material that Professor Cross had at his disposal and the modesty and ease with which he spoke and made his experiments. Frequent applause interrupted the address when some particularly brilliant effect was produced. The association, the president of which is no less an authority than Willis R. Whitney, head of the great General Electric laboratories at Schenectady, N. Y., realizes that the Institute has by far the best collection of apparatus showing the phenomena of high vacuums of any place in the country, educational or professional, and the care of the delicate items has been remarkable, for they all work to a charm.—*Boston Post*.

The donor of the fund of \$2,500,000, given anonymously to the Massachusetts Institute of Technology in Boston, is not Mr. Edison. When questioned about it Mr. Edison said: "If I had a billion dollars I wouldn't make such a gift," and added:

"I have better use for my money. I can use my money to a thousand times better advantage than any college in the country."

No doubt Mr. Edison has effective ways of using his money for the advancement of science and invention. But he was unfortunate in his reference to this institution. Boston "Tech" is known in the world of business wherever technical skill of a high order is demanded. It is preparing for an expansion of its activities. But what this school for the training of engineers and technicians of every kind has already done makes it fairly comparable with the Technical High School at Charlottenburg in Germany—the most famous of the kind outside this country.

An adjunct of the Charlottenburg institution is the Royal Bureau for Testing Materials. Altogether there are a hundred testing machines, and the staff employed is 222. Similar work has been going on in a quiet way for many years in the Massachusetts Institute. It has carried on testing of various kinds for corporations and individuals throughout the country, which have in notable instances revolutionized methods of preparing and shaping materials used in important industries. The Institution's new site, comprising fifty acres of land in the heart of Greater Boston, will hold model laboratories costing millions, splendidly equipping all departments of scientific work in its direct relation to industry. The new Boston "Tech" will have an amplified department of industrial research, which has outgrown its old quarters. The department will be prepared to assist manufacturers anywhere in the United States by helping them to overcome special difficulties in the scientific processes of their work. This requires more than routine knowledge of science. It demands originality and power of attacking new problems by methods new as well as old. The Institute places its great corps of scientific experts freely at the disposal of the industrial world, and undertakes to do its best in solving the problems presented for the mere cost of the investigation. The results already accomplished are an earnest of greater results to be expected with the opportunities that will be presented. Much depends in this field on the alertness of manufacturers and their quickness to take advantage of these opportunities. —*New York Times*.

With reference to the reported statement by Edison that he did not give the \$2,500,000 to the Institute of Technology, and would not do such a thing if he had \$1,000,000,000, President Maclaurin said yesterday that Edison's true position is logical.

"He is a man who has done things himself and his reputation is very high for the benefit of man," said Doctor Maclaurin. "He is intensive in his study and goes directly at what he wishes to do. He is all the time using his own money to advantage in his own work."

But at the same time Doctor Maclaurin fears that there must have been some misunderstanding on the part of the interviewer, whose words might bear the interpretation that Edison will not give to any college.

"This would be an injustice to the great inventor," said Doctor Maclaurin, "for the fact is that when he sees work of a quality commending itself to him, he does give and in testimony of this is a recent gift to the Institute.

"Mr. Edison has been greatly interested in the investigations under way in the Tech laboratories of electrical research, and has given a goodly amount toward the support and prosecution of the investigations on the efficiency of motor trucks.

"That Mr. Edison has the highest opinion of the Institute," said Doctor Maclaurin in conclusion, "there is not the slightest question. He appreciates the kind of work it is doing. It is only a short time ago, about the time of the great meeting of the New York alumni, that he said publicly, 'There is no question but that the Massachusetts Institute of Technology is the best technical school in the country. . . . I like the Institute because it is turning out men with usable knowledge, thus meeting the needs of America. It isn't perfect, but it comes nearer than anything else in giving American young men a really utilitarian education—a usable training.'"—*Boston Post*.

BOOK REVIEW

STRUCTURAL DESIGN—VOLUME 1—ELEMENTS. By Prof. Horace R. Thayer, '98, Assistant Professor of Structural Design, Carnegie Technical Schools, Pittsburgh, Pa.

This book differs from the ordinary book on structural design in that it does not spend a great deal of time in dealing with stresses in structures and methods of finding them. It presupposes a knowledge of mechanics, stresses and the mathematics on which they depend. It takes up the subject from the standpoint of what the designer and detailer must know in order to design and detail intelligently. It takes up very briefly the different materials in engineering and then takes up the usual sizes of timber and the usual shapes of steel sections, showing how they are cut or rolled and how variations in thickness are secured. Principles of design are then taken up briefly, bringing out proper and improper methods of arranging certain details. The design of a wooden roof truss and a Howe truss are then taken up. The author next proceeds to the general subject of fabrication of structural steel, taking up the plant in a general way together with the way in which it should be laid out, and giving several photographs and drawings illustrating different shops. The different machine tools used in the fabrication of steel are illustrated by photographs. The method of laying out work follows, and then the methods of making holes, upsetting to form eye bars, etc., are treated. Methods of erection are briefly discussed showing different typical methods. Specifications and the making and checking of detailed drawings are treated. The design of splices, joints, shoes, etc., follow.

The author has succeeded admirably in taking up the subject from a new and unusual viewpoint for writers on structural design. His idea has evidently been not so much to teach how to figure stresses as to teach how to design something which can be built at a reasonable cost in the ordinary structural shop in the United States. The book should prove useful to a very considerable number, not only of students and teachers but also of practical men.

L. E. MOORE, '02.

NEWS FROM THE CLASSES

1868.

PROF. ROBERT H. RICHARDS, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

On June 8 the class secretary, Robert H. Richards, was married to Miss Lillian Jameson, at the home of her mother, Mrs. Robert Edwin Jameson of Jamaica Plain, Mass. Prof. Richards has been head of the mining department for many years and has been prominent in the mining profession as the author of books on ore dressing and as the inventor of ore-dressing machines. Miss Jameson is a graduate of Smith college, has been a successful and enthusiastic teacher, and has been strongly interested in educational matters all her life. She was a very warm friend of, and co-worker with, the late Ellen H. Richards. They will carry on the Jamaica Plain home and make it of as much help to the students as in the past.

While in Denver in April last the secretary gave a dinner to J. G. Barry, 1907, M. W. Hayward, 1906, and W. H. Bunce, 1884. After the dinner the party went to the Broadway theatre to see the play the *Spring Maid*. Hayward recalled the fact that Richards had invited Hayward and Bunce to dine last September and to go to the *Spring Maid* after dinner, and from the coincidence he drew the conclusion that the *Spring Maid* was following the professor around. During the visit to Denver, Richards was invited to dine by M. W. Hayward and his sister with H. R. Low, 1903, R. P. Reynolds, 1906, E. K. Chase, 1906, and one of Miss Hayward's girl friends. At this and the previous dinner they talked over the old times at Tech and made merry over past and present experiences.—The writer and F. G. Coggin, 1891, also dined together and talked over the old times when they were together at the Calumet and Hecla Mine.—Richards and F. E. Shepard had several pleasant meetings and dinners together when the milling machines in which they were both interested were discussed, and plans made for the future; the recent great success in concentrating Lake Superior iron ore was one important feature.—Stevens Tolman and Richards had a pleasant reunion at the Pops, June 4.

1871.

EDWARD W. ROLLINS, *Sec.*, Dover, N. H.

Daniel Chester French's portrait statue of Ralph Waldo Emerson for the Concord Library has been examined and approved

by the committee and the officers of the library. The model was found highly satisfactory. Mr. French, the sculptor, and Dr. Edward W. Emerson were also present.

Emerson is represented in the vigor and alertness of early manhood, sitting in an armchair, leaning slightly forward, in the attitude of a listener. The figure is wrapped in a loose robe, making a very graceful ensemble. It is interesting to know that for this purpose the sculptor used the same robe that Mr. Emerson was accustomed to wear in his study at Concord.

The statue is to be of marble and about life-size. It is expected that the Concord Library will be enlarged and altered in a few years from now, and it is planned to have a hall in the building especially designed to contain the statue. The statue will be completed in the autumn of 1913. Its cost will be about \$20,000. In making it the sculptor based the likeness on daguerrotypes taken when Emerson was forty-five years old and on a portrait bust made from life in 1879 by Mr. French.

1874.

CHARLES F. READ, *Sec.*, Old State House, Boston, Mass.

The following relative to the death of Walter K. Means is clipped from a Manitowoc, Wis., paper:—

"In the midst of Life we are in Death" is a quotation which though an old one was aptly instanced in the death of Walter Keith Means at an early hour Wednesday evening when after only a day's illness he passed away.

Though given but a few hours to prepare for his final journey, having been stricken but a day before death came, Mr. Means had that particular requisite, possessed of which no soul hesitates to meet its Maker. He had been at Two Rivers on Tuesday in connection with some government work and returned tired though with no sign of the impending illness. He complained after a while of feeling ill and a physician came and administered to him. His condition grew steadily worse however and at 7 on Wednesday evening the spirit passed away.

Mr. Means had remained semi-conscious during the last day and had spoken to his wife several times cheering her and though unable to respond to her questioning remained partly conscious of his surroundings up to the very last. The immediate cause of his death was a rupture of the coronary artery. His death is a particularly sad ending to a perfect union. Seldom were two souls so happily mated as Mr. Means and his wife. Wedded but a short year and a half, the demise of Mr. Means is indeed a sad visitation and the sympathy of loving friends and acquaintances can alleviate only in part an affliction such as one is called upon to suffer but once in a lifetime.

Walter Keith Means was born in Augusta, Maine, Dec. 21, 1851. He was a graduate of the English High School, Boston, 1871, and the Massachusetts Institute of Technology, 1874, as a civil engineer. He came West to Milwaukee about twenty-two years ago and was associated with Mr. Goodhew in engineering work and first came to Manitowoc about the time the sewer system was planned, about twenty years ago.

He had been in the employ of the government for several years and has several times been in the city on government work. He was a member of the Plymouth Congregational Church, Milwaukee, and always took an active interest in the church affairs. While there he was a regular attendant at the Presbyterian Church. He was married to Alice Newcomb on October 4, 1910.

The decedent though reserved was a pleasant man to meet. He was of quiet and dignified bearing. A man exceedingly well bred and endowed with attributes of gentleness, who delighted to tell of his work in engineering fields. He had made a collection of pictures and curios and to those fortunate enough to see them and to hear him relate his experiences the occasion was indeed a treat. The community suffers a distinct loss in his death.

1876.

JOHN R. FREEMAN, *Sec.*, Grosvenor Building, Providence, R. I.

A Chicago newspaper paid the following tribute to Fred Greeley, who died there in February:—

For many years Mr. Greeley was identified with practically every movement for the improvement of civic conditions here. For fourteen years he was chairman of the small parks commission. When the Playground Association of America was organized he was chosen as its first president.

When the Commercial Club decided to work out a plan along which the city's future growth would be directed, Mr. Greeley was made a member of the committee. His experience as an expert surveyor as well as his connection with the small parks and playgrounds made him one of its most valuable members. For several years while the plan was being worked out he devoted practically his entire time to it.

Mr. Greeley at one time was secretary of the Union League Club. He was an officer of the Childrens' Home and Aid Society, and was a member of the building committee of the City Club. He was senior member of the Greeley-Howard Company, a firm of surveyors. He was born in Chicago and spent most of the fifty-six years of his life in this city. A new home had just been completed in Winnetka and the family had moved in only a few months ago.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

Robert D. Andrews, '77, has presented plans for addition to the Massachusetts State House which have been thoroughly endorsed by the Boston Society of Architects and other bodies who have been desirous of preserving the beauty of the present structure and the general architectural effect. There have been many present at the hearings and other suggestions made which have not been desirable. The idea of Mr. Andrews and the Boston Society of Architects is to build two symmetrical wings which will preserve the dignity of the entire building and not detract in any manner from the architectural effect. The subject will probably be referred to a special commission to consider during the summer and reported to the next General Court.—As the class of '77 had their 35th anniversary celebration at the dinner at the University Club in March, no special celebration was undertaken in June. At the Pop concert, Tech night, Faunce, Flint, Hale, C. F. Lawton and C. H. Peabody were present. Faunce has a son, who was graduated this year in the department of electrical engineering.—H. H. Carter has retired from the Metropolitan Contracting Company which is about to consolidate with other parties and will continue in general business as consulting engineer.—Walter Jenney, who was one of the charter members of the Appalachian Mountain Club, was elected vice-president for the ensuing year.—Arthur W. Temple, '77, has the sympathy of all in the loss of his wife, who died May 22, 1912.

1878.

E. P. COLLIER, *Sec.*, 274 Summer Street, Boston, Mass.

In the Brooklyn Navy Yard a great dry dock has just been completed, large enough to dock the largest American battleship afloat or in construction. This dry dock has been seven years in building. It is known as "Dry Dock No. 7," and for the last ten years has been referred to as the "Hoodoo Dock." Two contractors threw up their job and half a dozen engineers, after examining it, declined to take up the work. One of the chief troubles was that there was shifting sand under the entire site of the dock which wrecked the bracing, caused the collapse of a sewer, and did other damage. Several men were killed on it and over three hundred were injured. After this disastrous experience the government entered into negotiations with Rollins' Company, who took the contract in 1909. This settled all of the trouble. Piles were driven far below the quicksands, the caissons sunk ninety feet below tide-water level, and obstacle after obstacle was overcome until last month, when it was completed. The

dock has cost the government two million eight hundred thousand dollars, which is nearly three times as much as the original appropriation made by Congress.

1880.

GEORGE H. BARTON, *Sec.*, 16 Lexington Avenue, Cambridge, Mass.

A Boston *Herald* of recent date had a half-page article on the new project of the Teachers' School of Science which has outlined a nature museum for children. The Teachers' School of Science, of which the secretary is curator, will soon open such a museum in the refectory at Franklin Park. Its object is to demonstrate that the simple scientific development of scientific subjects makes a strong foundation for future study by teaching accurate thinking. The museum will attempt to inculcate keen observation of natural objects, the systematic arrangement of such objects, and the development of the child's reasoning powers and independence of thought.

1882.

WALTER BRADLEE SNOW, *Sec.*, 170 Summer Street, Boston, Mass.

The thirtieth anniversary of the graduation of the class was celebrated June third and fourth. On the former day the members dined and spent the evening at the Brae Burn Country Club, West Newton, Mass. The program for the second day included an automobile outing at Brigham Hill Farm, North Grafton, Mass., where lunch was served on the lawn in the shade of the grand old trees that bespeak the age of this most attractive estate. Returning in the early afternoon the class entertained at an informal dinner at Riverbank Court, Cambridge, President Maclaurin, Professors Richards, Cross, Burrison and former Professor Whitaker. Thence adjournment was made to the Pops at eight o'clock. Unforeseen circumstances prevented the attendance of several members—particularly those from a distance. Those present at one or more of the events were Darrow, French, Gooding, Hall, Herrick, Jenkins, Johnson, Low, Munroe, Snow, W. B., Walker, A. W., and Warren.

Johnson, who is now chief deputy city engineer of Los Angeles, Cal., was present for the first time since graduation. Cheney was unable to attend because of absence in Europe. Up to the last moment Hersey of Haverhill, Duker of Baltimore, Faunce and Manning of Pittsburg, and Snelling of New York, had expected to be present.

Correspondence regarding the reunion brought replies from several members of the class who have not been seen since freshman year.—Joseph H. Walker is now located at 1547 Estelle Ave., Los Angeles, Cal.—Neff, who at the time of writing was in the

Minnequa Hospital, Pueblo, is architect of the fuel department, Colorado Fuel and Iron Co., Pueblo, Colo.—Cochran's responsibilities as a member of the New York Stock Exchange, with office at 71 Broadway, prevented his attendance; the address of Adams who was formerly in Honolulu is now Alexander & Baldwin, Seattle, Wash.

1884.

HARRY W. TYLER, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

G. L. R. French has been appointed general superintendent of the Rutland Railroad. French has been in railroad work since 1885, when he entered the service of the Chicago, Burlington & Quincy Railroad as rodman. He has been connected with the Boston & Maine since 1890, serving since 1907 as superintendent, of the terminal division at Boston.—Tyler has succeeded Rotch as librarian of the American Academy of Arts and Science.

1885.

I. W. LITCHFIELD, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

REUNION AT FRANK PAGE'S.

The class of '85 was favored with three beautiful days for its annual reunion which was held at "Over Jordan," Frank Page's summer home, June 7, 8 and 9. Although this was not the occasion of any special anniversary and no particular effort was made to have a large crowd, twenty-nine men put in an appearance, among them Jack Harding, W. S. Page, E. C. Lufkin, Winthrop Packard and John T. Lyman, who have not met with the class for twenty-seven years. Those present were: Benton, Steele, Rand, Brown, Ames, Packard, Frazer, Harding, Spalding, Litchfield, Dewson, Fred Kimball, Frank Page, Plaisted, Hildreth, W. S. Page, Homer, Barr, Jim Kimball, Charlie Allen, White, Fiske, Williams, Lufkin, Lyman, Dawes, McKim, Nye and Richards. It happened very unfortunately that a number of the fellows could not possibly change other fixed engagements to attend the reunion. About twenty-two members of the class took lunch together in a private room at the Westminster on the 7th, after which they were taken to the new Technology site by automobile. President Spalding put the class through a few manœuvres, and having viewed the site and decided that it was good, they accepted it in the name of the class and dedicated it forthwith. After a beautiful ride the procession brought up at "Over Jordan," where the class flag was flying and where steward Colton welcomed us with a perfectly good dinner. Frank has a beautiful place, situated at the head of Onset Bay. It is an island only by courtesy, for since the road has been built there is always dry connection with the main land. It has a great many beautiful trees and the view is



CLASS OF '85
Frank Rand navigating the ship



CLASS OF '85
The Clam Bake, "Gov. Foss" presiding



CLASS OF '85
"Over Jordan"



CLASS OF '85
Some Yarns

superb. After dinner President Spalding informally made Tenney White master of ceremonies, and from that minute until the last cheer on Monday morning there was no lack of entertainment of any name or nature. One of the features of the evening was a rehearsal of the original Tech minstrel show given in Union Hall in 1881, many of the members of the class having been participants in that memorable entertainment. Memories of the V. L. Club, probably the most unique organization that ever existed in a college, were revived. Technology and its bright future were discussed, and national politics also came in for its share of attention. The conversation was conducted with infinite tact by Tenney White assisted by Harding and Fiske as members of the entertainment committee. At a respectful period after early morning coffee on Saturday, came breakfast in which nearly all participated. The New York and Albany contingent arrived during the morning, and after dinner the class inspected the northern part of Buzzards Bay in the vicinity of the opening of the new Cape Cod Canal, in a power boat. A trip along the line of the Cape Cod Canal by auto occupied Sunday morning and on the return, about one o'clock, Capt. Burgess opened the finest clam bake ever supervised by that renowned practitioner of gustatory engineering. There is always some serious purpose about every meeting of the class of '85 although it is sometimes difficult to discover it. The important development of the meeting this year was a most unusual and generous offer to the class on the part of Frank Page, whose influence and assistance has been felt in class matters in the past. Across the channel from his residence is a beautiful island, known as Lydia Island, containing about fifteen acres, which he recently purchased. Frank proposes to give this island to the class, provided they will do their part and erect and maintain a suitable club house. A meeting was called at the lower cottage with President Spalding in the chair, and Frank stated that he would be glad to give Lydia Island to the class, the only condition being that his interests as an adjacent landowner be protected, and that the class or a club erect a suitable club house and maintain it properly. He would want some provision to the effect that the property would revert to him in case certain conditions that would insure the proper upkeep were not compiled with. Dewson moved that a committee of five, of which the President and Frank Page and three others be members, be appointed by the chair. The chair appointed Brown, Litchfield and Morss to act with Spalding and Page as an executive committee to report on a plan for erecting a club house and maintaining a club on Lydia Island. Mr. Page suggested that this committee go into the matter fully and secure legal advice in regard to the taking over of the property. The proffer of Lydia Island as a gift created the greatest enthusiasm among the men present, and after a discussion it was decided that it was not only feasible but extremely desirable to take up the matter, first with the class

and secure contributions in the same spirit as Frank Page has given the island, and, after a considerable fund has been raised, to invite the men in other classes to become members, the idea being to maintain a first class club during the summer months where men could take their families or friends for a day or a month. The view down the bay from the island is most beautiful and the island is less than a mile away from the entrance of the new Cape Cod Canal. A vote of thanks was given Mr. Page for his most generous offer and his hospitality at "Over Jordan." The latter was commemorated by some bottle coasters which seemed most appropriate for such an occasion. The event was chronicled in a very happy way by Winthrop Packard in the *Transcript* of June 12. A copy of this article was sent to every man in the class.

—At the 75th anniversary of the founding of the University of Michigan, Tracy Lyon of Detroit was delegated to represent the Institute of Technology.—The Van Norman Machine Tool Co. recently incorporated in Springfield, of which Frank Page is president, has taken over the business and property of the Waltham Watch Tool Co. Not long ago Page purchased the Bausch Machine Tool Co., which we understand was sold not long ago. The new company will greatly increase the output of the plant and will undoubtedly be made as great a success as was the Bausch Machine Tool Co., under Page's management.—David Baker left this spring for Australia on a professional trip where he will be gone for some months.—Oakes Ames, who was operated on for appendicitis about three months ago, is now entirely recovered. At the time of the reunion at "Over Jordan" he was well enough to accompany the party and drive one of the automobiles.—Morss was one of the interested observers of the National Republican Convention at Chicago. Through some unfortunate chance he was not able to address the assembly in regard to the Alumni Fund or other matters relating to the Institute.—Tom Fry is representative of the Alumni Fund for New Hampshire and is starting a vigorous campaign which will put New Hampshire on the map in proper shape.—Billy Hopkins is living at Padanarum Mass., near New Bedford. Unfortunately he was unable to come to the reunion at Frank Page's.—The secretary recently received a cordial letter from Heywood Cochran of Chicago, who regretted extremely that he could not attend the reunion. Cochran hasn't been able to be with us since he left the Institute, but we are hoping!

1887.

HENRY F. BRYANT, Sec., 334 Washington Street, Brookline, Mass.

STOUGHTON WALKER.

All of us who recall Stoughton Walker in our Institute days and have continued the acquaintance will be saddened by the news



CLASS OF '85
On hearing that the limes have arrived from New Bedford



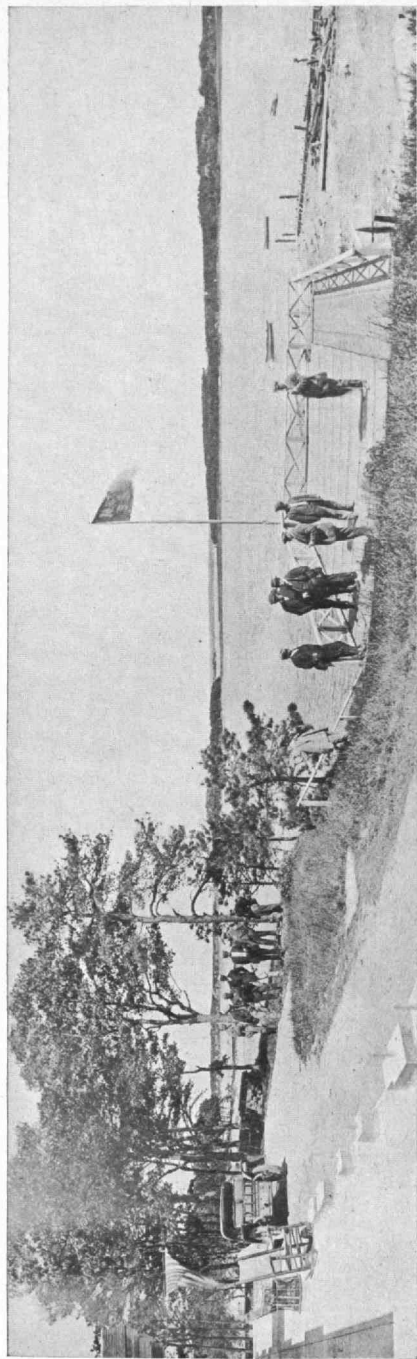
CLASS OF '85
Inspecting Tech Island and the Cape Cod Canal



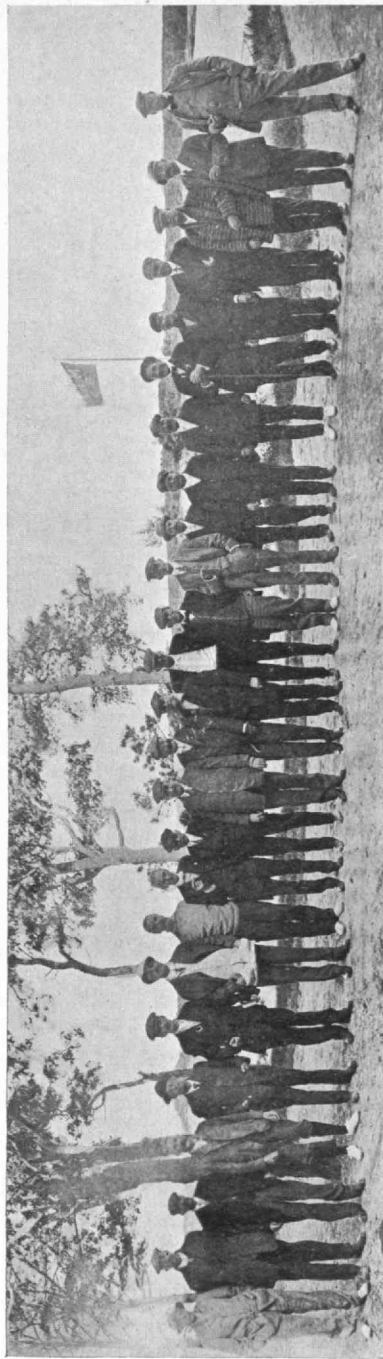
CLASS OF '85
Frank Page, Richards, Harding, Fiske, Lufkin



CLASS OF '85
Frazer, Spalding, White



CLASS OF '85
Tech Island is seen over the top of the scrub pine



CLASS OF '85
The Bread Line

of his death at sea on April 14, 1912. The following account of his life is from Mr. Brittain, whose daughter he married, and is a worthy record of a life well spent:—Stoughton Walker, son of General Francis Amasa Walker, President of the Institute of Technology of Massachusetts and of Exene Stoughton Walker, was born at Riverside, Township of Gill, Mass., on June 3, 1866; passed his early life at Riverside, and New Haven, Conn., Washington, D. C., and Boston, Mass. He moved to Saint Joseph, Mo., in June, 1888, to take a position with the Union Pacific R. R., until February, 1892, when he accepted a position with the American Telephone and Telegraph Co., at New York City; in the spring of 1893 he was transferred to the Chicago office of the company in charge of a department of the company's exhibition at Chicago World's Fair. In the fall of 1893 he went to Indianapolis and Cincinnati, Ohio, to open new offices in connection with the Long Distance Telephone Co.; in the spring of 1894 he was called to Boston, by the company; during the fall of 1894, he accepted a position with the John S. Brittain Dry Goods Co., of Saint Joseph, Mo., as treasurer of the company and was with them up to the date of his decease. He was a member of the Society of the Sons of the Revolution, the Loyal Legion, the Colonial Wars, Benton Club of Saint Joseph, Mo., B. P. O. E. and the Country Club. He was a non-resident member of the Technology Club of New York City. For several years he was a major in the National Guards of the State of Missouri, also non-resident member of Army and Navy Club of New York City. He was married October 21, 1891, to Miss Jessie Brittain of Saint Joseph, Mo. The following children were born:—John S. Brittain Walker, January 5, 1894; Mildred Walker, September 7, 1895; Francis Amasa Walker, 2d, October 15, 1901; Stoughton Walker, Jr., January 24, 1904; Francis A. Walker, 2d, died January 5, 1911. The widow and three children survive. Stoughton Walker was lost overboard from Steamer *Mauretania*, of the Cunard Line on the night of April 14, 1912, about 8.15 and the body was not recovered. He was returning from a short visit to England. He is mourned by all who knew him, devoted to his family and his friends, loyal always to all; upright, honest and a man of the strictest integrity in every sense of the word, he leaves an honored name and an unsullied reputation. Esteemed most highly by all, his ardent and magnetic nature attracted all who knew him and inspired sincere affection. His unselfishness and thoughtfulness of others, his devotion to his family, were very marked characteristics of his generous nature. His death so sudden and in such a way that no one knows how it happened, only that he was lost at sea, is a terrible blow to all his family and friends.

'87'S TWENTY-FIFTH ANNIVERSARY.

"'87 luck" as to weather provided this year as usual four glorious days, June 1 to 4, for our reunion at The Moorland, Bass Rocks, Gloucester.

Those of us who could get away early had a glorious automobile ride along the north shore on Saturday morning and reached the hotel in fine shape to enjoy a dinner provided by our host, Mr. Parsons.

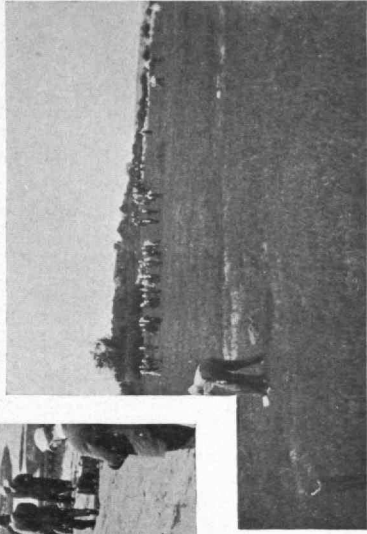
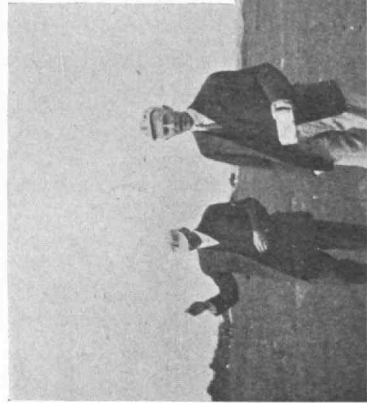
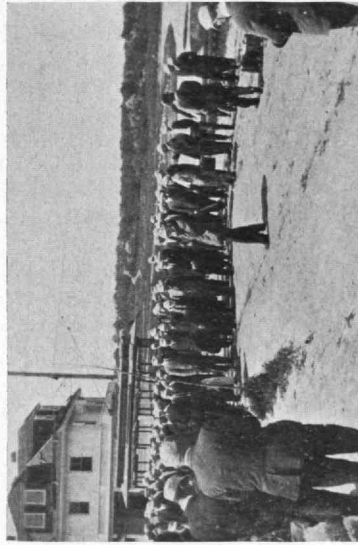
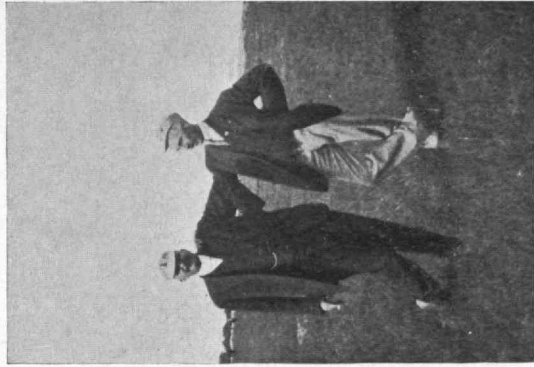
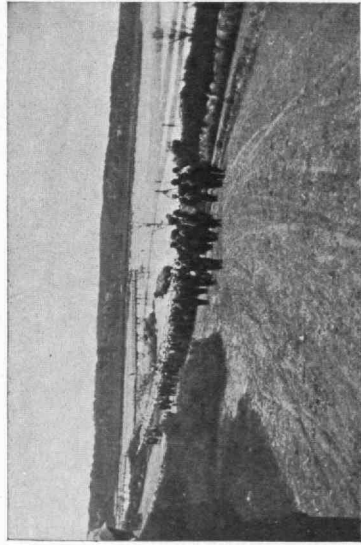
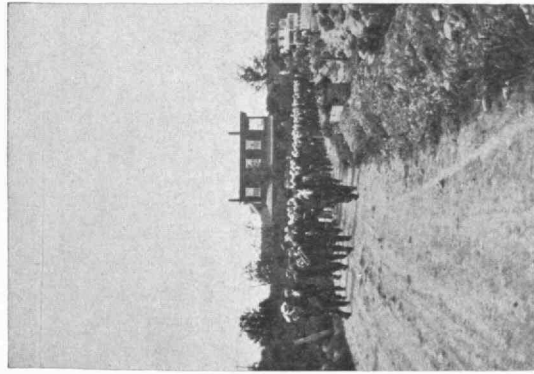
Just to "start something" an invitation was extended to the graduation class of 1912 to spend the afternoon and evening of this first day with us. They arrived by special train 200 strong at 2 p. m. As soon as they were refreshed we adjourned to a neighboring field and indulged in a baseball game, playing them to a standstill. We had a working nine of surpassing ability including that famous pre-historic pitcher, F. A. Thomas, and of course, no mere students could hope to do much against him. "Ike" Litchfield, '85, who honored us with his presence on that day, served with "Pa" Coburn as umpire. They were pretty generally rotten and apparently based all their decisions on the rules of 1812, but with a strenuous effort we were able to save their lives. It may be that '87 had rather the best of the decisions on individual plays; but the umpires were discreet enough not to name the winners, contenting themselves with announcing the score as "87 to 12." We hope that some day they will screw up their courage sufficiently to name the winner so that the same may be suitably rewarded. There were no steins at third base until late in the game, which accounts for the fact that few of our fattest men passed second. When however, refreshments appeared at third, the scores came in at a terrific rate.

Soon after the finish of the game between '87 and 1912 we were called back to the hotel where we were served clam chowder—clam chowder—and more clam chowder—at least, those were the three courses of which everybody partook, although salads and other refreshments were available.

As soon as darkness fell we assembled in the big dining-room for our quinquennial stereopticon show of pictures of the old days of '83 to '87 and of our various anniversary gatherings. Then the class of 1912 came to the front and entertained us with stories, songs and stunts, until they were forced to leave to catch their special train home.

1912 proved to be a splendid crowd of fellows whose acquaintance we enjoyed most thoroughly. Every '87 man wishes them the fullest degree of success individually and as a class. The success of their visit with us is very largely due to the efforts of their indefatigable treasurer "Charlie" Carpenter, who is the embodiment of energy itself.

Sunday morning we indulged in tennis doubles and golf, Cobb



Class of '87 on its 25th Anniversary entertaining the Class of '12

and Douglas winning the championship in tennis, while Proctor carried off the honors on the golf course.

The star event of our gathering was our Sunday trip to Chebacco Island where "Jules" Cameron lived up to his reputation for hospitality and served us with one of his famous clambakes. Whether we surpassed previous records or not cannot be stated positively, but some of the clams were understood to say that they had never attended larger mass meetings of their fellows or had been more seriously over-crowded.

Sunday evening a regular business meeting was held at which the secretary had his turn and at which some (?) business was enacted.

On Monday some of the boys had to leave us but the larger part stayed over until Tuesday, finding enjoyment on the golf course, tennis courts, automobile rides and swimming, and also at Souther's sideboard.

Modesty forbids that we should report all the doings of Monday night "rough house," but suffice it to say that we lived up to the best traditions of '87, our host Parsons being called from his slumbers about one o'clock in order to assure himself that the hotel was still standing. Richardson and his flute added not a little to the joyousness of the night shirt parade. We found that he can play with equal skill whether standing on a cigar case or on two cases of beer.

Tuesday evening we gathered at the Boston Athletic Club for dinner and from there marched in a body to Symphony Hall to attend the Pop concert. Here we joined the class of 1912 for a triumphal entrance.

At the outing were present Cobb, "Squash" Cushing, "Mon" Sturgis, "Dick" Schmidt, F. A. and E. G. Thomas, Crosby, Sprague, Coburn, H. F. Bryant, Souther, Carney, Stewart, Proctor, Richardson, Gulliver, Cameron, Hobart, Douglas, Brett, Lane, Harry Adams, W. H. Brainard, H. D. Sears, E. P. Noyes, R. E. Curtis and Young. Taintor and Wakefield spent the day with us at Chebacco and at the Pop concert our numbers were augmented by H. Mulliken, E. Smith, Livermore and Mossman.

1889.

WALTER H. KILHAM, *Sec.*, 9 Park Street, Boston, Mass.

An extremely interesting volume showing the leading facts in the growth of the Mutual Insurance System has been published by the Arkwright Mutual Fire Insurance Co., and was compiled by E. V. French, vice-president and engineer of that company. The book, which is remarkably handsome in its makeup, clearly shows how the study of hazard has absolutely controlled the fire-waste in factories. It is handsomely illustrated with a large number of views showing the progress in factory construction as well as the effect of several disastrous fires.—F. W. Hobbs delivered a

thoughtful address before the Southern N. E. Textile Club on January 20 on "The Manufacturer; his Responsibilities to Stock-Holders and Operatives," which has attracted wide attention.—Rev. Charles E. Beals has written a convincing pamphlet entitled "The Higher Soldiership" which has been published by the Chicago Peace Society.

1890.

GEORGE L. GILMORE, *Sec.*, Lexington, Mass.

Tech night at the Pops this year found only four members of the class of '90 on the floor,—Burley, Loring, Spaulding and Gilmore.

An article by Garrett P. Serviss in the *Cosmopolitan* for April on "The New Conquest of the Heavens" speaks very highly of George E. Hale and his work at Mt. Wilson where 100" lens, the largest in the world is being installed under Hale's direction. A picture of Hale is shown where he is operating the spectrograph from the base of the 150-ft. tower telescope at Mt. Wilson in Pasadena, Cal. Hale was in Boston in April and with Goodwin went to Lexington for a round of golf with Gilmore on the Lexington course.—H. M. Waite is chief engineer of the city of Cincinnati.—We understand that Chick is getting after the grafters and pushing things the way he did when he was halfback on the Varsity team in the late eighties.—At the 16th annual dinner of the overseers of the United States Finishing Co., at Norwich, Conn., in March, Billy Collins was one of the speakers. Billy is assistant manager of the Norwich plant.—Samuel Storrow whose residence is Los Angeles, Cal., has been in Boston this spring.—At the dinner of the Central Station Representatives of New England of the General Electric Co., at the Somerset in Boston, March 29, Dr. W. R. Whitney was the speaker and gave a talk on "Recent Investigations." Willis is in charge of the research laboratory of the General Electric Co., at Schenectady and is also building a residence in the suburbs of that city.—C. W. Sherman is treasurer of the Boston Society of Civil Engineers.—The New England Military Rifle Association which holds its 8th annual tournament during the week beginning August 26, will have for its chief competition an All-American trophy valued at one thousand dollars which has been presented by Col. Charles Hayden, paymaster general, M. V. M. Col. Hayden's loyal co-operation has been evidenced annually since the association was organized by the donation of a trophy for a 2200-yard competition, and this munificent addition to his other gifts proves him to be a lover of the sport and a believer in the American marksman.

G. N. Calkins and family are at their summer home at Woods Hole on the cape.

The class is making an effort to raise its share towards the Alumni Fund. It has already raised about \$22,000.00, thanks

to the generous offer of two of our members, which is certainly a help towards the \$40,000.00 required of our class. As yet only about thirty members have replied, so there is an ample chance for the class to bring the subscription up to the required amount.

1891.

HOWARD C. FORBES, *Sec.*, 88 Broad Street, Boston, Mass.

21ST ANNIVERSARY—DEDHAM COUNTRY AND POLO CLUB,
JUNE 4, 1912.

A glorious day was scheduled to arrive for '91's 21st anniversary outing. Forbes met most of the "Outers" at the train for Dedham; while Young ran his auto to Cambridge, picking up Garrison and gathering the baseball paraphernalia at Forbes', thence, in a cross-country run to the club, being the second to arrive, Cunningham having driven over from his home near by. Shortly after, Alley arrived in his car, and then Bowen. A few minutes later came Forbes and his party in the barge. On a later train Punchard arrived, making the total of seventeen—a small number for our class.

They were as follows:—Alley, Bowen, Bradley, Capen, Cunningham, Dart, Forbes, Garrison, Holmes, F. C., Kimball, Moore, F. C., Pratt, N. R., Punchard, Ryder, Vaillant, Wason, Young.

At about 11 o'clock we started a game of soft ball on the polo field:

SECRETARY'S TEAM.					TREASURER'S TEAM.				
	1	2	3	4		1	2	3	4
Garrison, <i>Capt.</i> , p	0	+	+	0	Vaillant, [_{2b} ^p]	+	+		+
Holmes, 2b	+	+	+	+	Pratt, rf	0	0		0
Forbes, 1b	+	+	+	+	Bradley, cf	0	L		+
Dart, 3b	0	0	0	0	Punchard, ss		0		0
Moore, [_{cf} ^{ss}]	+	0	0	L	Wason, <i>Capt.</i> , c	0		+	+
Young, [_{rf} ^{lf}]	+	+	0	0	Alley, 1b		0	+	+
Cunningham, c	0	+	+	+	Ryder, lf		+	0	L
	—	—	—	—	Kimball, 3b		+	0	L
Total	4	5	4	3	Bowen, [_{2b} ^p]		+	0	0
				16	Total	1	4	2	4
									11

The preliminary inning was cancelled as the secretary's team started with 15 runs.

Then came a sumptuous repast.

As Henry Bradlee's term of office as president expired as the second course was finished, it was unanimously voted to place

Alley in the chair. Thereupon Vaillant precipitately retired toward the kitchen, soon to reappear with a pitcher of champagne concoction. This was so popular that a second trip was necessary. Bowen was elected as class treasurer, as he had been fulfilling these duties for several months past. It was considered a perfectly safe proposition since there was a deficit in the treasury. Garrison resigned his place on the Tech Council, on account of moving to New York, and his place was filled by Alley.

It was voted to raise the annual dues from 50 cents to \$1.00 but it was not stated as to who would raise the \$1.00s.

After a short rest, we hastened to the tennis court, where the following matches took place: Kimball and Forbes won over Punchard and Bowen—6-0; Holmes and Vaillant won over Young and Garrison—6-2; Kimball and Forbes won over Young and Garrison—6-1; Holmes and Vaillant (not having had enough) won over Young and Garrison—4-1. Time called for return to Boston.

Bowen has taken Wason to an earlier train. The barge left for the 5.47 train for Boston. Young took back the baseball goods to Cambridge, Punchard, Pratt, Capen and Garrison being passengers; thence to the Thorndike. Vaillant went with Alley, planning to spend the night with him.

A little before 7 most of the party were at a lunch at the Thorndike, the only new member of the class to appear being Ambrose. At 7.30 the party broke up, the most going to the Pop concert, where they were joined by Boyd, Bryant, Cormier, Dana and G. A. Holmes.

—Edgar C. Savage, who was with the American Optical Company in Southbridge, has left that concern and is now with the Pelton Water Wheel Company in San Francisco.

Addresses: Edgar C. Savage, 2459 Howard Street, San Francisco, Calif.

1892.

PROF. W. A. JOHNSTON, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

PROF. C. H. CHASE, *Asst. Sec.*, Tufts College, Mass.

At the annual meeting and banquet held at Hotel Thorndike, June 4, the following officers were elected for the ensuing year: president, George H. Ingraham; 1st vice-president, W. Spencer Hutchinson; 2d vice-president, Herber S. Potter; secretary-treasurer, William A. Johnston; assistant secretary-treasurer, Charles H. Chase. The following men attended the banquet: Carlson, Chase, Carter, Forbush, Fuller, Hall, E. C., Jr., Heywood, Hutchinson, Ingraham, Johnston, Kales, Metcalf, Newkirk, Park, Potter, Warner. A part of the celebration of the 20th anniversary was held at Fa'mouth Heights, Mass., from June 1 to June 4. It is to be regretted that so few were able to take part in this event as it was certainly a pleasant occasion for those who were

able to attend. Hutchinson was elected official scribe to write up the event. The following men were present: Curtin, Fuller, Hall, J. W. Heywood, Hutchinson, Ingraham, Johnston, Kales, Locke, Marcy, Moore, Newkirk, Ober, Park Potter, Sager, Sargent, Shepherd.—Kales has recently retired from the Public Lighting Commission of Detroit, Mich., and a recent number of the *Detroit Journal* published resolutions of appreciation of his work adopted by the other commissioners. Mr Kales has been a member of the commission for six years and proved his great value to the city both by his expert knowledge and his self-sacrificing industry in the work of the commission. The work in which the commissioners have been engaged has been fundamental and Mr Kales has done much to give proper direction to the activities of the commission with reference to the greater future of the city.—Fuller and Johnston have been advanced in grade and now are professors in theoretical and applied mechanics.—Park has been advanced to grade of professor of mechanism.—B. P. du Bois who is a paymaster in the U. S. N., is now with the Asiatic Squadron.

CLASS OF '92 TWENTY YEAR REUNION.

Falmouth Heights, Mass., June 1 to 4, 1912. Eighteen men gathered at the Terrace Gables: Wm. R. Kales, Detroit, Mich.; W. M. Newkirk, Philadelphia, Pa.; Frederick C. Moore, Hartford, Conn.; A. J. Ober, Newport, R. I.; Albert S. Heywood, Worcester, Mass.; Oscar F. Sager, Brockton, Mass.; Albert F. Sargent, Malden, Mass.; Wm. W. Locke, John A. Curtin, Charles E. Fuller, John W. Hall, W. Spencer Hutchinson, So. Framingham, Mass.; George H. Ingraham, William A. Johnston, W. A. Marcy, Charles F. Park, H. S. Potter, Frank C. Shepard, Boston, Mass.

The party arrived at Falmouth Heights, Saturday afternoon, by automobile. Cars were furnished by Park, Curtin, Potter and Douglas, the latter to our regret was himself unable to attend.

Saturday afternoon all limbered up with a game of scrub in the ball field and opened the *banquet* at 7 p. m. with the Rackety Whack Yell. After dinner letters of regret were read by Ingraham from some of the men who were unable to come. Heywood, chairman of the Worcester district committee explained the purpose of the Alumni Fund and urged the members of '92 to do their part. When the men of '92 understand the situation correctly, their standing will reflect credit on the *class*. Kales spoke with characteristic convincing earnestness and Potter contributed joyous enthusiasm.—Sunday was a delightfully pleasant day. The maximum temperature was 66° which contrasted with 92° the same day in Boston. The morning was given over to a sail in a large motor boat. Crossing the Sound to Martha's Vineyard, we skirted the shore several miles and saw a mile-long sea wall of granite blocks, built by Ober several years ago. An automobile

trip to the Cape Cod Canal took up the afternoon.—Monday morning witnessed an exciting base ball contest arranged by the athletic committee. The Faculty's team won by a score of 23 to 10, in a hard fought game. The Faculty team distinguished themselves appropriately by their team work and by stealing bases. The batting order follows:—

Johnston c.
Fuller 2b.
Park, 3b.
Kales, 1b. *Capt.*
Sager, p.
Shepard, s.s.
Ingraham, l.f.
Hall, r.f.

Locke, p. *Capt.*
Ober, c.
Sargent, 1b.
Hutchinson s.s.
Newkirk, 2b.
Moore, 3b.
Heywood, l.f.
Curtin, r.f.

Water sports followed the ball game. Kales and two other pioneers had tried the water out on Sunday and found an agreeable bathing temperature, 67°.

The tennis match in the afternoon attracted an enthusiastic crowd. Here, too, the Faculty showed its skill. Park defeated Ingraham in one set, 11-9. Fuller and Newkirk defeated Hall and Hutchinson in three sets, 2-6, 6-4, 6-3, and Johnston bested Heywood 6-2, 6-1.

The party returned to Boston by automobile Tuesday morning and gathered for dinner at the Thorndike at six in the evening. Here they were joined by Braman, Chase, C. H., Carlson, Fairfield, Forbush, Hall, E. C., Hopkins, Metcalf and Warner.

The celebration of the twenty-year reunion of the class of '92 closed with the attendance at the Pop concert.

1893.

FREDERIC HAROLD FAY, *Sec.*, 60 City Hall, Boston, Mass.
FREDERIC H. KEYES, *Asst. Sec.*, 739 Boylston Street, Boston, Mass.

The nineteenth annual meeting and dinner of the class of '93 was held on June 12 at the Suntaug Inn, Lynnfield, Mass. The following members were present; F. B. Abbott, T. M. Brown, L. B. Buchanan, E. B. Carney, W. W. Crosby, H. W. Dawes, F. N. Dillon, J. C. Dufort, F. H. Fay, G. B. Glidden, E. Kenison, F. H. Keyes, H. M. Latham, E. S. Page, and J. F. Tomfohrde.

During the afternoon several spirited contests were "pulled off" on the quiet shores of the lake in which Dillon with his usual good luck proved an easy winner, first in a long distance stone throwing match and again as captain of the winning team in a game of baseball. "Ed" Carney carried off the honors playing duck-on-the-rock after which the fellows marched in true

military fashion to the inn announcing their arrival and welcoming a few late comers with a lusty class cheer.

An excellent dinner was served in a private dining-room at seven o'clock, after which the annual meeting was held and the following officers were elected for the ensuing year. E. B. Carney, president; E. D. Densmore, 1st vice-president; H. M. Latham, 2nd vice-president; F. H. Fay, secretary-treasurer; F. H. Keyes, assistant-secretary.

E. B. Carney extended an invitation to the class to hold the first meeting in the fall at the Vesper Country Club at which time suggestions will be considered as to the best ways and means of celebrating our 20th anniversary in 1913.

Resolutions of sympathy were also passed and the president instructed to forward the same on behalf of the class to William B. Page whose wife died at Leominster, Mass., May 31, 1912.

This was the first meeting of the class which J. C. Dufort of Course IV had attended since graduation. He is doing business in Montreal under the firm name of Dufort & Decary his partner being a member of the class of '05 M. I. T. Dufort married Miss Julia Braün of Alsace-Lorraine, May 29, 1899, and has three children, Eglantine, Leon and Victoria, twelve, ten and seven years old respectively.—Frederic H. Keyes announces that he is now associated with the Sanitary Engineering Co., 739 Boylston St., Boston, Mass., having severed his connection with Timothy W. Sprague, '87 and Henry D. Jackson '97 at 88 Broad St., Boston, on the first of June. Prof. S. Homer Woodbridge of the Institute is president of the company; Royce W. Gilbert, Course XI, '09 is vice-president and manager; and O. B. Prescott, Harvard '03, treasurer; and the name of Stone & Webster appears in the capacity of consulting engineers for the company.

In accordance with the usual custom the class of '93 had the honor of escorting Dr. Maclaurin and James W. Rollins, '78, president of the Alumni Association, into the hall at the Pop concert held in Symphony Hall, June 4.

Arthur Farwell has been reappointed for the third season supervisor of Municipal Concerts, New York City.—Dalton Parmly was married Feb. 29, 1912, to Miss Lillian E. Briggs of Oceanic, N. J., and states that his wedding anniversary will come only once in four years.

1894.

PROF. S. C. PRESCOTT, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The present year seems to have been an off year for '94 men so far as attendance on class functions was concerned. As a result of a circular letter sent out ten days in advance, but five men showed up for the dinner and only seven or eight at the Pops. It seems that from the replies which the secretary has received that there

were an unusually large number of men who were forced by business or other circumstances to be out of town. Let me bespeak for 1914, our twentieth anniversary, a very large attendance and also let me suggest that any member of the class who has ideas as to how we can fittingly celebrate on that occasion, should send them to the secretary who will carefully guard them and bring them out at the proper time for further consideration.

A number of interesting letters have been received from members of the class, some of which may be abstracted for this report. C. H. Johnson writes as follows:

My present position is superintendent and foreman, Public Works department U. S. Naval Station, Guantanamo, Cuba. Am down here with Assistant Civil Engineer Ralph Whitman, U. S. N. (M.I.T.) '00, building a new naval station. Just now we are doing all the work by day labor and I have five subforemen, about one hundred seventy laborers and two dredges working on the job. The labor is a mixture of Chinese, Spaniards, Cubans and all the different kinds of West India negroes, Haytians, Dominicans, Porto Ricans and men from the different British, French, Dutch and Danish West India Islands. At present we are doing dry excavation, dredging, filling into tide water, and a few small concrete foundations. Later we will have some pipe to lay and some steel frame buildings to erect. Oct. 16, 1911, had a son born, Carl Erik Johnson, who is sure one husky kid. Expect to be down here a year or two longer.

George Taylor has just been on a business trip to northeastern Maine and so was unable to attend the meeting. Taylor is the head of the Taylor Machinery Company of Boston.—Leonard Tufts planned to come down from his farm at Meredith, N. H., but found it impossible at the last moment.—John Nowell writes that he is plant manager of the Bell Telephone Company of Pennsylvania with his head-quarters as usual, at Philadelphia.—Frank Lovejoy is general manager of the manufacturing departments of the Eastman Kodak Company at Rochester.—Clafin is doing valiant service as the class representative on the Alumni Fund committee and deserves the very cordial support of all members of the class. We have not made a good showing up to the present time but it is quite certain that before Clafin finishes his business-like and convincing appeals '94 will come up handsomely and do her full share in the important work of equipping the new Institute. Incidentally it may be remarked that Clafin was chosen class president at the meeting and that he bears his new honors with his accustomed grace.—C. A. Catlin who took some special work at the Institute in the senior year is chemist and a director of the Rumford Chemical Works at Providence.—Milton Jones is an insurance engineer connected with one of the large Boston companies and was prevented from attending the meeting and the Pops by a western business trip.—J. W. Jones of freshman baseball fame is in the automobile business in Boston.—D. C. Chaffee writes that he is an architectural draftsman in Peoria.

Another member of the class who has not been heard from previously for a long time, is M. M. Wheeler who is now the chief

engineer of the Kentucky Midland Railroad with headquarters at Central City, Ky. It is extremely pleasant to get even short notes from these men who have maintained silence for so many years.—John Ferguson is assistant engineer to the directors of the Port of Boston.—R. H. Ober is superintendent of buildings and a member of the Board of Public Works of Seattle.—Bovey is director and superintendent of the Washburn & Crosby Company at Minneapolis.—Hopewell is a member of the firm Hopewell Bros., manufacturers of automobile fabrics in Newton.—Zimmerman is located at 37 Madison Ave. in New York in the practice of architecture.—S. A. Breed is the proprietor of a boys' camp, Camp Ossiaukee, on or near the shores of Lake Winnepesaukee where he spends the summers building up healthy youngsters and training them in various sports.—Ben Holden sends his address as 1800 Railway Exchange, Chicago, Ill.—Pollock's present position is Ingeniero Encargado de la Pavimentacion, Habana, Cuba, and he writes as follows:

I resigned my place as acting chief engineer of highways in New York early in March, 1912, and came down here to take charge of the paving contract in Havana. Piper was down here a couple of months ago. He hunted me up through the American Club, and I saw him a couple of times. Remember me kindly to the boys.

W. F. Spaulding is located at 10 Post Office Square, Boston, and is in the bond business.—G. W. Sherman is manager of the salvage departments of the Diamond Rubber Co. at Akron, Ohio, and R. K. Sheppard is manager of the Insulated Wire sales department of the same company.—Bates is president of the Northern Ohio Technology Club, as well as professor of electrical engineering at the Case school.—Beardsell is a counter manufacturer and sends his address as 20 Prescott Road, Lynn, Mass.—Patrick has become a certified accountant with an office at 127 Columbus St., Elyria, O.—A recent number of the *Engineering and Mining Journal* has a descriptive article of the Vulture Mine, one of the most important, historically, in Arizona and which has produced millions of dollars in gold since its discovery in 1863. This mine was practically abandoned at one time but in 1908 work was again begun and is now being actively carried on. The article goes on to say that "for solving an exceedingly intricate and complex fault system and the discovery of the new ore bodies, Angus R. Mackay, manager, and W. Spencer Hutchinson, '92, consulting engineer, deserve credit."

1895.

WILLIAM H. WINKLEY, Sec., 44 Kilby Street, Boston, Mass.

A committee was recently appointed to consider the matter of monthly class luncheons and it reported that it is desirable to have a class luncheon on the first Thursday of each month at 12.30 P.M.

at the Boston City Club, 9 Beacon Street, Boston, Mass. The price for the luncheons will be \$12.00 per year, payable in advance. A general invitation is hereby extended to all members of the class to attend these luncheons. Subscriptions are to be sent to W. H. Winkley, 44 Kilby St., Boston, Mass.

The following letter was recently received by the former secretary from F. E. Matthes:

It occurs to me at this late hour that I owe the class of '95 profound and humble apologies for having neglected to inform them of my marriage—almost a year ago I married Miss Edith Lovell Coyle of Washington, D. C., June 7 last. Mrs. Matthes accompanied me to the Pacific Coast last summer and participated in my second campaign in the Mount Rainier National Park (of which I am preparing an elaborate topographic map). She stayed in camp with me four months, thoroughly enjoying the outing, although it was marred by much bad weather, as is usually the case in that region. We are hoping to travel again this year, God and Congress willing. With best regards to the class.

At the class dinner on June 4, 1912, there were present; J. L. Newell, E. H. Clapp, W. H. Winkley, F. L. Richards, L. K. Rourke, E. L. Hurd, G. A. Cutter, W. H. Watkins, R. J. Williams, F. S. V. Sias, A. D. Fuller, Gustavus Clapp, W. S. Williams and G. A. Rockwell.

At the dinner it was announced that as a result of the class balloting, E. H. Clapp was elected president, and W. H. Winkley, secretary for the next three years.

Those at the dinner adjourned to the Pop concert where they were joined by a number of other members of the class.

Francis C. Green was married on May 25 to Mrs. Marie Tudor Garland, at Bay End Farm, Buzzards Bay.

Mr. Green is the son of Elizabeth Stillman Cushing Green and the late Commander Francis M. Green, U. S. N. His mother is a daughter of the late Judge Cushing of Boston. He is one of the four lineal descendants of James Otis and a grand nephew of Mrs. William B. Rogers, who died last year and whose husband was the founder of the Massachusetts Institute of Technology, of which Mr. Green is a graduate, class of '95.

Mr. Green's association with the Institute has been close since his graduation. He was one of the promoters of the Technology Club of New York, whose clubhouse is located at 17 Gramercy Park, between the Player's and the Columbia Club. He is chairman of the committee of the permanent fund of the Institute, and a member of the Alumni Council. He is engaged in business in New York, where he is president of the Commercial Engineering Company. He is a member of the University Club of New York and the New York Yacht Club, as he is of the St. Botolph Club in Boston. His New York home is at 155 East Thirty-sixth Street.

The Boston *Traveler* says:—Technology has no more loyal alumnus than Public Works Commissioner Rourke. Not only does

he take in all meetings and social gatherings of the Tech alumni, but he always makes it his business to call on all Tech men in City Hall departments and get them to go along. Tech men acknowledge him as the leading rooter in City Hall for the institution.

1896.

PROF. CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

DR. JOHN A. ROCKWELL, *Asst. Sec.*, 24 Garden Street, Cambridge, Mass.

The last report of the Alumni Fund Committee showed that '96 was number 27 in order of merit. '96 has held exactly this position for the last five or six weeks. Although some classes have gone up in the scale and others have gone down, the funds have come in with remarkable uniformity. The class, however, will hardly be satisfied with maintaining this mid-way position, and we believe in the fall, when the active work of the fund begins again, that there will be large increase, not only in amounts but in number of subscribers, which is of almost equal importance.—'96 turned out in good shape at the Pop concert. There were fifteen men present, among them R. E. Bakenhus, his first appearance with the class for fifteen years.—Professor Locke is now on a trip with the summer school of mining engineering. His tour included New Jersey, Ontario and the Cobalt country.—Charles Hyde of Berkeley, Cal., is coming east this summer. He will be in Boston during some part of his vacation and will have a chance to call on a number of his classmates.—Dr. Rockwell, as chairman of the Fund Committee, wishes to express his appreciation of the way the class has been backing him up, and solicits the co-operation of those who have not had time to send in their subscriptions up to date.

1897.

JOHN ARTHUR COLLINS, *Sec.*, 67 Thorndyke Street, Lawrence, Mass.

A number of the class met at the Boston City Club on the evening of April 15, 1912, and enjoyed a dinner as the guests of the executive committee. The idea was to boom the coming fifteenth anniversary reunion at Osterville, and much enthusiasm was aroused. The secretary produced a financial statement showing all the expenditures since 1907 (when a financial statement had been sent out) and as a result it was decided to call for an assessment of three dollars. Eighteen men were present.

The Osterville reunion was a great success and detailed accounts of how the time passed will be found on another page. After lunch on Saturday, June 1, a regular class meeting was held, being called

by the secretary. C. W. Bradlee was elected chairman. The principal business transacted was the election of an executive committee of five which together with the secretary would look after the interests of the class during the next five years. The committee which had conducted and made all plans for the present outing, with the exception of Mr. Hopkins, was unanimously chosen to continue the good work. These men are Bradlee, Breed, Harry Sawtelle, Worcester, and Dougherty. Hopkins was an active worker on the former committee, but by reason of leaving Boston for other fields, he could not again serve. On June 3, he left for Cleveland, Ohio, to become factory manager of the Mechanical Rubber Company. It was voted that this executive committee should appoint sub-committees in the principal cities to look after '97 men and see that they got together frequently in order to keep alive the class spirit.

In the course of the correspondence with the members of the class in regard to the reunion many interesting letters were received. Extracts from a number of these follow: Noble wrote that the man who takes his place when he is away had just been summoned to do jury duty, so he (Noble) had to stay on the job.—Sellew wrote that, sometime since, he met with an accident in which he lost a leg, thus making travel very difficult for him and preventing him from being at Osterville.—Sheldon Howard pays a tribute to the executive committee thus:

Have never before seen so much activity on the part of our old class members—several of whom have already written on the subject—and I am sure this gathering will even surpass some of those howlers we had in the active days.

Ferris, whom we all remember as the feather-weight of the class, sends:

"I had a very nice letter from Dougherty telling me that he wanted above all things to see my slender shanks again, and I should have enjoyed immensely posing with Worcester or even yourself (Bradlee) in a pair of '97 bathing suits. You or Worcester representing the before, and I, the after taking Dr. So-and So's anti-fat or in a reverse order indicating the advantages of a happy disposition and an ability to assimilate the fluid that intoxicates but never satisfies. With regard to said fluid I was badly handicapped in early life, and I well remember a sad incident of my senior year at Tech when I blew into a gin mill on Tremont Street with a bunch of Freshmen and Sophomores. They got what they went in for but I, on account of my inability to persuade the bar-keep that I was seventeen, was forced to drink ginger ale.

Gleason writes from Seattle:

I have searched your program thru several times to find what part the good old sand broilers, the astute berries (Charlie Breed can place you on these) and the pickaninny bread play in the same, but find they have been overlooked. This is a literal translation of the "Scientific German" subject "Boston in the Making."

On Tuesday evening preceding the Pop concert about a dozen of the class sat down to dinner at the University Club. Later



FIFTEENTH ANNIVERSARY OF THE CLASS OF '97 AT OSTERVILLE, MASS.

they adjourned to Symphony Hall, where they were joined by other '97 men and numbered about twenty in all. A very enjoyable evening was spent.—Hammond, Course I, who for some time has been with the Connors Bros. Co., contractors, Lowell, is preparing to establish himself as consulting engineer in Boston. At present he is located at the rooms of Hugh Orr, at 7 Water Street. He is residing at 41 Lincoln Street, Malden.

Kent writes from Fort Leavenworth, Kansas, as follows:

As usual, I will be with you only in spirit for the anniversary. My desire to get back to Boston and see our old stamping grounds again, has been equalled only by my inability to do so; when Uncle Sam says "Come hither," I cometh, and when he says "Go thither," I goeth, yea verily, even so, and he has a habit of saying one or the other right frequently. I had a trip up there planned for the spring of 1908, figured to go from Washington, D. C., to San Francisco (I was then changing station from Cuba to Alaska) via Boston, arriving there for the graduation exercises. But my sailing date was suddenly advanced fifteen days and that is the nearest I have been to getting back.

I have been on the jump since leaving Technology; went to South Dakota with the Geological Survey till December, 1897, then to Washington with the D. C. Eng. Corps, till May, enlisted in the Volunteers, got a commission as 2d lieutenant, went to Cuba, with the 3d Volunteer Engineers, back in May, '99 commissioned in the army in June, '99, went to the Philippines for a little over two years, back, via Suez Canal, to Plattsburg, N. Y., for a little over a year, to the Philippines for a year, back to California, then to New York Harbor, to Cuba in 1906, to Alaska in 1908, back to Fort Thomas, Ky., in 1909, to Honolulu in 1911, then here. Here I am back at school again, and I am here to say that when it comes to grinding, Technology has mighty little over this place. We are all right sure to graduate, but only a third will be kept for the post graduate work next year, and we all want to be in that third. Before I went to the Philippines the first time, I had sense enough to get married, and now have a nine year old girl whom every one says is pretty and the image of me. You can reconcile these statements as best you can, I do not pretend to. My hiking has agreed with me, I am still under 200 lbs. but not far, and I gained it all in the Philippines.

Well, if anybody inquires, you can tell him what I have been doing, and say that I still have hopes that when I return from Honolulu next time, I may get within striking distance of Boston, and I will sure hit for it. Remember me to all friends.

—E. R. Olin was married on June 15 to Anna Cushing Clapp of Braintree, Mass.—Henry Warren (Harry) Stevens was married on the evening of May 29 to Miss Marion Dana Rice at Allston, Mass., the home of both. A number of Tech men were present, Ed. Parker, '04, serving as best man. The heartiest best wishes of '04 are extended to "Steve" and Mrs. "Steve."—Thos. R. Weymouth recently presented a paper at the Cleveland meeting of the American Society of Mechanical Engineers on the "Varying Compositions and Properties of the Different Natural Gas Fields of the United States." *Power* of June 18 has an extract from the paper.

Geo. H. McCarthy, IX, was married on Saturday, June 1, to Miss Mary Lovell Fellows of Boston.—A. W. Jackson, IV, has just gotten out an attractive and instructive book "The Half-Timber House," a book setting forth the claims and advantages

of that distinctive style of English Country House, the half timber house with the contrast of light plaster against the dark wood. The book is $7\frac{1}{4}$ x 10 Format, bound in linen board and is finely illustrated with photographs, diagrams and floor plans. It was published by McBride, Nast & Co., at \$2 per copy.—Word has come to the secretary of G. K. Compton of Dayton, Ohio, whom some may remember during our first year. He has been an invalid for twelve years, and at present is seriously ill in a Minnesota hospital.—W. H. Allen has been confined to his house for some time by malarial troubles and Pike, II, is being bothered somewhat by inflammatory rheumatism. The secretary feels sure that the sympathies of every one in the class go out to these our fellow mates who were unable to join us in Osterville by reason of illness, and they have the best wishes of us all for a speedy and complete recovery.—On April 19, a son, John Edward, Jr., was born to Mr. and Mrs. J. E. Carty of Boston.

The secretary wishes to thank all those who were at Osterville, and others who by letter have expressed their approval and appreciation of his futile, but nevertheless well-meant efforts to keep up the class organization during the past fifteen years. One man could not do it all, and as that one man was elected by the class, he could hardly be held responsible for being the only official. He can recall numerous class dinners and class day spreads when after much advertising and preparation the number present could be counted on one hand. And again in sending out requests for assessments or for information for a "class book," not fifty per cent. of the men would reply. Was this all the secretary's fault? Could he be blamed for getting a bit discouraged? And when the half dozen energetic fellows in Boston took hold and by real hard work made the fifteenth anniversary reunion one grand success, no one welcomed their efforts more than did your secretary, for first of all and always does he have at heart the interests of the class of '97. And if in the minds of the class he is no longer serving those interests as he should, then he will be only too glad to retire in favor of some one else.

CHRONICLES OF THE FIFTEENTH ANNIVERSARY REUNION OF THE
CLASS OF '97, AT OSTERVILLE ON CAPE COD, AS TRANSCRIBED
BY R. A. SWAN, OFFICIAL REPORTER.

The class of '97, fifteen years removed from the Institute, planted its orange and black standard at Osterville on Cape Cod, Memorial Day, and one of the most interesting and successful reunions that any Tech man knows about followed. During the four days no less than 45 men joined in the festivities, which started with a bath at sunrise and ended with a nightcap at midnight. It was one continuous round of pleasure that the committee arranged, with the pleasures of renewing old friendships added. The

men succumbed to the lure of Cape Cod, and it was the unanimous opinion that nowhere was a place where more diversions could be found, nowhere could the arrangement be more nearly ideal, the commissary department more satisfactory, and furthermore nowhere could be found a better bunch of good fellows than the men who represented '97 at its greatest gathering since they marched down Rogers steps with their degrees in hand.

The attractions of Osterville were many. The headquarters of the class were at the Cotocheset House, where a mammoth orange flag bearing the inscription in black "M. I. T. '97" floated at the peak. These colors were woven in the specially knit ties which every '97 man knotted around his neck, and in the banners that streamed from the automobile squadron, which included a new auto-bus which transported one party of the class from Boston to Osterville, and was always on tap to reach the golf links of the Seapuit Golf Club, the bowling alleys and billiard tables of the Hyannis Yacht club, or for a ride through the Cape Cod towns. The Kellermans and Steve Brodies of the class had half orange half black jerseys that made a noise heard in Marthas Vineyard, across the sound, so warm that the chilly water almost boiled when '97 bathed.

The men who attended follow: Henry E. Worcester, Boston; William Binley, Jr., New York; J. M. Gilmore, New York; Alfred Hamilton, Montclair, N. J.; A. H. Pugh, Jr., Cincinnati; Hugh K. Moore, Berlin, N. H.; Earl P. Mason, Newport, R. I.; Benjamin A. Howes, New York; Charles W. Bradlee, Boston; John A. Collins, Jr., Lawrence, Harry F. Sawtelle, Cambridge, C. D. Hubbard, Alexandria, Va.; C. B. Breed, Lynn, Mass.; C. R. Currier, Jamaica Plain, Mass.; Charles H. Eames, Billerica, Mass.; H. A. Clark, Lee, Mass.; Joseph Bancroft, Wilmington, Del.; Wilfred Bancroft, Philadelphia; W. A. Faxon, Buffalo, N. Y.; J. P. Ilsley, New York; H. M. Deavitt, Chicago; Ralph S. Vinal, Winchester, Mass.; George L. Hosmer, Woburn, Mass.; Ezekiel C. Sargent, Quincy, Mass.; Walter B. Russell, Boston; Ernest F. Learned, Watertown, Mass.; Edwin P. Bliss, Boston; A. L. Jennings, Chester, Conn.; Charles L. Hammond, Boston; Edwin A. Brainerd, Albany; A. T. Hopkins, Cambridge, Mass.; William C. Ewing, Boston; William O. Sawtelle, Cambridge; F. H. Watts, Columbus, Ohio; Rodolphus A. Swan, New Bedford, Mass.; Walter L. Spear, New York; J. C. Royce, Toronto, Canada; Walter Humphreys, Boston; E. R. Motch, Cleveland, Ohio; John P. Alden, Newton, Mass.; George S. Lawlor, Boston, Mass.; F. S. Hitchcock, New London, Conn.; Proctor L. Dougherty, Boston; Jesse B. Hubbard, Boston.

The courses represented at dinner Friday night follow: I, 8; II, 10; III, 0; IV, 3; V, 3; VI, 6; VII, 1; VIII, 1; IX, 2; X, 3; XI, 2; XII, 0; XIII, 1; a total of 43 members of the class.

There were thirty-three at the long table in the dining room of

the Cotocheset hotel the first night, and it was ascertained that all but three of the men had success in finding wives, and that nearly all of the fond parents had prospective Tech men in their families, some two and three, while Charles B. Breed was credited with four, the largest brood, a regular Rooseveltian family.

Although the weather was a bit cool, and Cape Cod was the centre of a Scotch mist, some of our very best swimmers donned the bathing suits and tried the ocean. The biggest cranberry barrel on the Cape had to be located to get the chairman of the reunion committee back to dormitory. Something happened to the puckering string, and—well, imagination may have some play to complete the record of this incident.

It was a long, pleasant, happy evening, the first one spent at the Wayside, where about 30 of the men were quartered. There was talking at the bridge-whist tables, and a continual buzz of reminiscences among the men who looked on, and it was long past midnight when the class was all tucked in.

The navigators of the class were not able to take the sun until late in the afternoon of Friday, but a little thing like drizzle could not upset the plans for a gay day. Some went fishing and returned with a fare for breakfast and tales of wonderful fishing for tautog, scup and sea robin.

The Seapuit Golf course offered attractions for another group who found one of the sportiest courses on the Cape to be no easy proposition, but the most wonderful event of all was the base ball game, a limbering up contest, at which W. O. Sawtelle officiated as umpire and exercised his voice, his discipline and his self-control so that when he took the stage the night after in the role of auctioneer, he was the fittest and wittiest bid coaxer that was ever produced, in this country or abroad. Runs were not counted, it being Friday, and too late in the week to begin such a task without violating the blue laws of the state which prevent anything but work of necessity on Sunday.

The bus took the bowlers and the billard sharks who were well trained at the Chapel to the Hyannis Yacht Club after supper, and a tired bunch rolled back at midnight, honoring W. A. Faxon as king of the bowlers, and the first prize winner of the reunion.

The real ball game was played Saturday afternoon, and fortunately for the big business of the country in which '97 men are dominating figures there were no scouts of the major leagues in the grand stand. If they had seen Alden capture a fly from H. F. Sawtelle's bat, and send the ball on a joy ride to first base for a double play Alden would be on the pay roll now. Jesse Hubbard was in tears at the loss of a perfectly good hat during a good part of the game, and it took a safe hit to find it. When he arrived at first base he found that it had been pressed into service as the bag, and the game could not go on without it.

John Collins caught everything that soared towards center field with the exception of a home run drive from Vinal's bat.

The Fried Eggs (so called from the fact that they could not be beaten) composed of Binley, ss; Currier, 1b; Collins, cf; Jennings, 3b; Spear, p; Sargent, 1f; Brainerd, rf; Alden, 2b; and Ilsley, c, and Humpreys as short stop after the fifth inning, made 16 runs, and allowed their opponents, the Amalgamated Muckers, 5 runs. The A. M.'s were J. Hubbard, c; Motch, ss; Jackson, p; Vinal, 2b; Eames, 3b; C. D. Hubbard, 1b; Lawler, 1f; H. F. Sawtelle, cf; Worcester, rf., Joe Bancroft and W. O. Sawtelle enforced the rules with majestic command.

H. E. Worcester, '97's young whale, was more at home in the ocean than on the ball field. He ran like a cattle boat, but for speed in the ocean the *Titanic* had nothing on him, and he made Ilsley and some of the other water dogs look like crabs and crawfish.

Saturday night the class gathered for the annual dinner with President Maclaurin and J. W. Rollins, president of the M. I. T. Alumni Association, as guests, and from each the men heard something of the new M. I. T., and the plans for the Walker Memorial. Wilfred Bancroft, the last president of the class paid a high compliment to President Maclaurin when he said "it almost seems as though General Walker was back with us again, a young man in the full vigor of his life."

C. D. Hubbard awarded the prizes for the various events and he had the prowess of the winners well estimated. A list of the winners follows: William A. (Larned) Currier, first prize tennis singles, cigar jar; J. P. (McLaughlin) Ilsley, second prize tennis singles, a tiny cup; W. A. (Larned) Currier, and (Beals Wright) Jackson, first prize tennis doubles, thermos bottles; C. H. Eames and H. F. Sawtelle, second prize tennis doubles, cups; Harry (Annette Kellerman) Worcester first prize swimming race, thermos bottle; W. A. Faxon, first prize in bowling and golf events, two cups; Edwin A. Brainerd, booby prize, bowling, book of rules. After dinner, an imported vaudeville show was given in the Casino, after which W. O. Sawtelle performed as auctioneer, and after he shied his hat and coat into the ring, there was a continuous flow of coin for the souvenirs of the occasion. At the business meeting of the class, the members approved the plan of the reunion committee for a permanent executive committee to manage the class affairs for a period of five years, John A. Collins, Jr., of Lawrence, the permanent secretary, to be an ex-officio member of this committee. The executive committee consists of Charles W. Bradlee, Harry E. Worcester, H. F. Sawtelle, Charles B. Breed and Proctor L. Dougherty.

An assessment was levied for the purpose of a testimonial to John A. Collins, Jr., whose hard, thankless work as permanent secretary, is appreciated by the class. The reunion committee,

which deserved the highest praise for its efforts, was cheered and thanked, and the service it rendered went far to making the gathering an inspiration to all Tech men to "get together" for a good time and for the Institute. The '97 yell faded away at Osterville, Sunday the 2nd of June, and every man promised himself to join in the 20th reunion of the class and to bring along another member of '97.

The class is indebted to the Oliver Ditson Co., for the use of the phonograph, free of charge, which we used at our outing. We found this musical program very entertaining, and trust that all who enjoyed it and are contemplating the purchase of a phonograph or of any musical instrument will consider Oliver Ditson in this relation.

1898.

ERNEST F. RUSS, *Sec.*, 70 High Street, Boston, Mass.

The annual meeting and dinner of the class was held at the Boston City Club, on the evening of June 4. The principal business was to formulate plans for the fifteenth celebration of '98 next year. Among those present were A. L. Davis, Coombs, Dawes, Barker, Babson, Robinson, G. A. Hutchinson, Dodd, Curtis and Russ. The interesting feature was the presence of Hutchinson, who recently, came from Mexico; his first visit to Boston in eight years. He reported having seen several of the men in Mexico City, and especially spoke of Blackmer and High. After dinner, the annual Tech night at the Pops was celebrated, where a number of other men joined the ones that came from the dinner. E. R. Barker was at the meeting, although not feeling very fit. He suffered from a nervous breakdown due to overwork, while in Virginia on some business connected with paper mills.—Charles E. Lord has resigned his position in charge of the patent work of the Allis-Chalmers Company, and the Bullock Electric Mfg. Co. He has been connected with these people the last eight years, and now becomes general patent attorney for International Harvester Co. in full charge of the patent work of said company. His address is 606 S. Michigan Ave., Chicago, Ill.—George Horace Breed sailed the 14th of June for Stockholm, Sweden, to fence with the United States Olympic team. He is still with the New York architects, Carriere & Hastings.—Dickson Brown went to Panama, Jamaica, Cuba and Palm Beach this Spring.—E. N. Milliken is with the chemistry department, Columbia University, New York City.—Huntington moved from Marsena, N. Y., to Detroit, Mich., several months ago, to take charge of the Detroit office of Crosby Co., manufacturers of sheet metal stampings.—Milan V. Ayres is now with Ford Bacon & Davis, 115 Broadway, New York City where he has the position of statistician.

"Pop" Coburn was very much in evidence at the "Pops" this

year, as he was celebrating his 25th with '87.—P. F. Lombard took in his Harvard celebration so he was missed from ours.

1899.

H. J. SKINNER, *Sec.*, 93 Broad Street, Boston, Mass.

An informal class dinner was held at the Boston City Club Tuesday, June 4, immediately preceding Tech night at the Pops. Witherell, Richmond, Mork, O'Hearn, Kingman, Eaton and Skinner were present. Richmond, who is chairman of the class alumni committee, was present and explained the progress which had been made. At the time of writing our class stood 28 out of 44 with 41 subscribers. The amount subscribed is \$4005.—Swan is acoustical engineer for the H. W. Johns Manville Company, Madison Avenue and 41st Street, New York.—Eaton is a member of the Board of Aldermen of Waltham, Mass.—F. L. Lacaff is superintending the construction of the new post-office at Denver, Colorado.—Ellery is located in Chicago with the Illinois State Department of factory inspection.—C. B. Page was appointed this spring to the position of manager of American and Canadian sales in the marine engine department of the Ferro Machine & Foundry Co., Cleveland, Ohio.—The following changes in addresses have been received: W. B. Flynn, 100 Broadway, New York; L. C. Soule, 186 So. Michigan Avenue, Chicago, Ill.; H. H. Starr, 30 Church Street, New York; J. B. Ellery, 1621 W. Division Street, Chicago, Ill.; C. S. McDonald, 311 Newhouse Building, Salt Lake City, Utah; F. L. Lacaff, 503 Symes Building, Denver, Colorado.

1901.

ROBERT L. WILLIAMS, *Sec.*, 154 Magazine Street, Cambridge, Mass.

Saturday, June 22, the class held its annual dinner and outing at the Piquoit Motor Inn, Nantasket Beach. In accordance with the amendment made to our Constitution last year, nominations for class officers were received and a postal ballot will be sent to each member of the class. This will give the men away from Boston an opportunity to take an active part in the affairs of the class which they could not do in the past.

Regarding the Technology Fund the secretary notes that our class stands number 28 in the list of 44 classes which have subscribed; \$3,885 has been pledged by 36 of us. We have always stood well in matters of this sort, starting in with the Walker Memorial Fund at our graduation, and then later on the Income Fund. A far greater opportunity now presents itself to render service to our alma mater and also to distinguish ourselves. Let's get busy! J. T. Scully, 123 Brooks St., Brighton, Mass., is chairman of the Fund committee for '01.

Langdon Pearce is division engineer for the sanitary district of Chicago. He is vice-chairman of the sanitary section Western Society of Engineers.—Ralph H. Stearns has recently left New York and gone to Hartford, Conn., where he is division engineer in charge of the design of a new water supply work for that city. There will be 3 dams, 9 miles of pipe line, and filtration works.—Carl F. Johnson is now located at Milwaukee and is vice-president and works manager of the Johnson Service Co.—The following men attended Tech night at the Pops:—Rowe, Scully, Brigham, Sexton, Player, Monaghan, Dow, Haley, Brush and Williams.—Austin T. Hyde is with the Fort Hill Chemical Co. and is located at Rumford, Maine.—James C. Woodsome is manager for Stone & Webster of the Tampa Electric Co. doing railway, electric lighting, and power business in the city of Tampa, Florida.—Edwin F. Church, Jr., is professor of machine design and construction, College of Engineering, West Virginia University.—William E. Farnham has been continuously in telephone work since graduation and is now in New York.—E. J. Proulx is a hydraulic engineer with the Ambursen Hydraulic Construction Co.—Francis B. Driscoll is exchange fundamental plan engineer for the American Tel. & Tel. Co.

The following changes in addresses have been recently received:—Chas. E. Martin, 103 Crescent Ave., Melrose, Mass.—Wm. S. Holford, 657 Schuyler St., Portland, Ore.—E. H. Green, 14 John St., Providence, R. I.—Edw. P. Burdick, Milburn, N. J.—H. B. Chalmers, Quoque, Long Island, N. Y.—John M. Perkins, 344 Main St., Torrington, Conn.—John A. Ross, 28 Elm St., Potsdam, N. Y.—C. W. Cade, care Crown Park & Seal Co., Baltimore, Md.—Walter M. Curtis, 64 Beaumont St., Springfield, Mass.

1902.

F. H. HUNTER, *Sec.*, 281 Park Street, West Roxbury, Mass.

J. ALBERT ROBINSON, *Asst. Sec.*, 87 Milk Street, Boston, Mass.

Work is progressing steadily on the Decennial Class Record, which the secretary hopes to get out in August, and full account of the recent reunion and other class news will be found therein, and to this all classmates are referred. The following is a brief account of the recent doings. Eight classmates gathered on the 10 A. M. train for Worcester on Saturday, June 1, viz.: Pendergast, Sherman, Sears, Mullaly, Joe Philbrick, Hunter, Manley, and Robinson. At South Framingham, Fitch got aboard, and at Worcester, Lockett joined the party, having dropped off the Chicago limited a few minutes before. The Princeton Inn the destination of the party was reached before lunch via train and bus. Rob Whitney arrived a little later, having come over the road in his R. E. O. car with Hall and Shedd for passengers.

The afternoon bus added Fisher, Millar, and Moore to the party. Golf, tennis and baseball took up the afternoon. In the twilight a remarkable game of ball was pulled off on the village green. The sturdy citizens of Princeton were gathering for town meeting, but it was impossible to get a quorum inside the hall until darkness called our game. The feature work was the playing of first base by Dana Fisher. When the runner was coming before the ball, Dana would seize the bag and depart, keeping it away from his opponent until the latter was tagged out. Needless to say Dana's side won. The evening was started with music, Millar and Sears alternating at the piano, Whitney on the mandolin and all hands singing; later all switched over to cards, to let the other guests of the inn go to sleep. Sunday morning most of the party visited Mt. Wachuset, three miles distant. Pendergast, Mullaly, Manley and Hunter making the round trip on foot, Whitney and Fisher via auto, while Shedd, Sears, Hall, Fitch Moore and Robinson rode one way and walked the other. Golf, fishing and other diversions took up the rest of the day. Several men had to return to Boston, via train or Whitney's auto, to be ready for business Monday morning. The nucleus returned by train, reaching Boston at 10.15 Monday, all voting Princeton a fine place and singing the praises of Landlord Beaman of the inn. The scene of the reunion was next transferred to waterfront where, after a delay that was not her captain's fault, the cabin motor boat *Mystic* took us aboard and started for Bass Point, where we arrived all the hungrier for being a bit late for dinner. Ballard, Larrabee, Teague, Murray Walker, Bourneuf, Mahar, Grant, Ned Baker, Haskell, Stillings, Al Crowell, Phil Whitney, Towne, Wood, Chas. Boardman, and Doc. Williams joined the originals for this excursion, while Collier was found awaiting us on the rocks of Nahant. A fine shore dinner at the Bass Point House was tackled with a will, indoor baseball was played, and the return voyage to Boston was made, arriving at about six p. m. The banquet at the Copley Square Hotel saw a still larger number of men on hand,—Proctor, Seabury, Adrian Sawyer, Howard Turner, Chas. H. Boardman, Hooker, Charlie Mixter, Magrane, Patch and Whittet joining the crowd. Music,—Hooker singing, Mullaly on the alumiphone and all hands on the chorus enlivened the evening. By heroic efforts President Pendergast got the business of the evening transacted, the class officers, with the exception of Nickerson, who declined, owing to the calls of business, to serve longer as assistant secretary were unanimously re-elected, and Robinson was chosen to fill the vacancy. A rising vote of thanks was tendered to Nickerson for his seven years of service to the class in the office he had just laid down. Adrian Sawyer addressed the gathering in regard to the class' share in the Alumni Fund, mentioning what had been received in this

line, and what ought to be. Some others spoke in spite of the efforts of the House Committee. On Tuesday many members accepted Pendergast's generous invitation to be his guests at the Wellesley Country Club. Tennis took up the forenoon and tennis, golf and baseball the afternoon. Starr and Harry George, who had not been on hand earlier, got onto the band wagon. The ball playing of "Chub" Patch, aged five, put to shame that of most of the older men present, and assisted the team captained by his father in winning over that led by Austin Wood. Before leaving the Country Club it was unanimously voted that the class president was the best fellow alive and a prime mixer of punch as well. A buffet supper was served at the class headquarters at the Copley Square Hotel, with Everett, Tolman, and Thurston added to the crowd. After this the line was formed with the big blue banner and we marched to the Pops with Mullaly on the drum and Hall on the bugle. At Symphony Hall, Fletcher, Fitzgerald and Lindsly joined us, making forty-six men together, the largest number that any class, except the newly graduated, had on the floor. A feature of our entry to the Pops was "Chub" Patch who rode in on top of a large globe, proving that '02 was, as always, "on top of the earth." The globe was a most ingenious affair which pretty effectually concealed "Chub's" father who contrived it. The Pops closed the reunion, in which fifty-one members of the class took part, and of which all carried away memories that will urge them back strongly when '02 has another reunion.—For further details see the class book. The other class affairs since the last reunion went to press were, a dinner in New York,—a Ladies' Night, the first ever,—and a bowling match with '05, which we lost by a close score will all be reported in the class book. A large amount of personal news will also appear there.

1903.

MYRON H. CLARK, *Sec.*, 43 Glen Rock Circle, Malden, Mass.
R. H. NUTTER, *Asst. Sec.*, Lynn, Mass.

On the evening of April 10 twenty-nine members of the class and guests gathered at the Union for a very enjoyable informal dinner. Henry A. Morss, '93 gave us a stirring talk on the Alumni Fund and what was expected of our class. Following the dinner we adjourned to the Chemical Lecture Hall in the Lowell Building when our number was increased to about sixty, and then listened to a most interesting talk by one of our own classmates, George E. Kershaw, who spoke on the "Uses of the Oxy-Acetylene Blow Pipe." Kershaw as eastern manager of the Linde Air Products Co., has traveled over a large part of the world, and had superintended cutting off the bow of the ill-fated battleship *Maine*, also

in cutting down the Quebec bridge; and in cutting into the steel vaults in the Equitable Building in New York after the fire. He described the work on these interesting undertakings and showed several pictures and relics of the *Maine*. He also gave a demonstration of the oxy-acetylene blow pipe with the equipment which is used at fires.—The following letter and photo received from W. H. Adams will be of interest:—

TIENTSIN, CHINA, March 15, 1912.

Things are humming in this part of China just now. On the 2nd, Tientsin was looted and burned but the university escaped. I was under fire for the first time in my life. A spent rifle bullet passed over my head so close that I could feel it. It was not aimed at me as there was no intention to kill foreigners. Only one foreigner lost his life and that was more or less of an accident.

I am enclosing one rather poor photo of the summary method of vengeance that is used in this country. This poor devil was formerly chief carpenter in the Viceroy's yamen here. He was caught looting and the next day was beheaded. His head was then suspended by the queue from one of the iron pillars on the bridge which crosses the river. I have a choice collection of photos and post-cards showing other similar sights. One shows a head just falling from the body with the blur of the knife. Fortunately or unfortunately I did not witness an execution, although many foreigners did. About one hundred men were executed.

School is now closed and we do not know when it will reopen. I have not done any regular work since the first of last November. We have received all our salary to date and the authorities do not wish us to go home. School did not really shut down until the looting of Tientsin, as we were running with a few students before that.

I may be home this summer but it is rather uncertain.

—A request for a letter has brought in the following good result from Hayden at Manila:—

I have been in the Philippines since the early part of 1904, and with the exception of a trip to the States in the latter part of 1907, my stay has been continuous. I came out for the Philippine Government, and after completing my two-year contract with a few months to spare, I went to work for the Manila Railroad Co., a corporation that controls the lines on the Island of Luzon.

For the last two years I have been contracting on my own account in a vain effort to accumulate rapidly some perceptible ratio to the \$70,000,000 that J. P. Morgan made before breakfast in the steel reorganization. I haven't succeeded very well owing principally, no doubt, to the fact that I haven't J. P.'s stuff in my make-up but also due to some extent to lack of capital as I have to borrow most of it and have to pay about 24% interest. However, I am accumulating valuable experience which I hope to cash some day.

Many changes have taken place here, especially in the capital Manila City, since the American occupation. In the matter of things to eat I can remember the time when an apple was worth going a long way to see, to say nothing of eating it. As for fresh peaches, pears, celery and other fruits and vegetables of the temperate climate, they are comparatively recent introductions. It may seem strange to those who have never been in a tropical climate, that one should crave the fruits of the temperate zone. But it is so. There are some good tropical fruits, especially the Philippine mango, classed by some as the finest of fruit, but rather aptly described by a writer on the Philippines as having "a twang of turpentine which inclines one on first acquaintance to consign it to the nearest ditch." Taken as a whole, there is a perceptible loss if the table is deprived entirely of the products of the temperate zone. However, that is now very completely remedied as the efficient steamboat services from the United States and Australia are supplying the growing

demand for these things. Even I was astonished a short time ago to see apples and oranges displayed for sale in a little native tienda along with the mango, papaya, banana, and betel nut of purely native consumption.

Relative to the Government and the political situation, things appear not to have improved so much. Should I say now that the Filipinos want independence, as Sr. Quezon, the Philippine delegate to the United States, is telling our good people back in Boston? No—not without so many modifications that you would not recognize the article. Sr. Quezon voices the desire of the political element, or to put it plainly, the fellows who would divide the government among themselves for their own benefit, so long as they could do it amicably. *Vide Cuba*. The general situation of the masses of the people is incomparably better under the American Government than it ever was under the Spanish Government, or than it would be under the government of the upper class Filipino. The wages for common labor have risen 400% since the days of Spain. Any native who desires work can get it. A serious trouble lies in the fact that a great many of the natives are too lazy to work. The Spanish solution of this was to make practically a slave of the native who, under his head man or cacique, was obliged to work for a bare existence. Our solution is to educate the native so that an intelligent self-interest will put him to work. Along this line, however, the efforts of the educational department have not been entirely successful. Rather it has proved the old saying "A little learning is a dangerous thing." Speaking from a practical standpoint, many a promising mechanic, laborer or servant has been ruined by a little education, so that he no longer wants to labor but goes about with American clothes, linen collar, and shoes (the wherewithal for which he browbeats his old parents) disdaining any form of work lower than office work. The mistake has been made by our Government in its widely extended system of free liberal education. I was amused by overhearing in a street car an animated discussion among some Filipino youths, carried on in extremely accented English, on the comparative merits of the old English authors. Free education above the three R's should be confined to the trades and to agriculture. The country is in great need of mechanics and laborers in order to develop its latent resources for while in parts the Philippines are comparatively well populated, the indulgence of the climate deprives its inhabitants of natural spurs to industry. With a little scratching of the ground, camotes (native sweet potatoes) and corn are grown. Bananas of numerous kinds, some for cooking, grow wild everywhere. The streams abound with fish. A cotton shirt and trousers are worn all the year round, the latter often made of discarded flour sacks. Why toil and slave for money which will buy you nothing you want? Two or three days' work on the Government roads during the year will earn the p2 personal tax imposed by the American Government. This presses far less than the original p40 once imposed by the Spanish Government. So serious has the demand for laborers become that were it not for the certain impossibility of getting the United States Congress to approve it, efforts would be made to open the doors of the Philippines to immigration from China.

I had intended to say something about engineering work in the Philippines, but my previous subject has taken up so much space that I shall have to leave it for another letter.

I see that W. H. Adams, who is at Tientsin, has threatened to come and see me several times. He has not come yet, but I live in hopes, as I am very anxious to compare notes with him. My inability to make that previously mentioned ratio has prevented my going up to see him. Also I hate to give the ratio the jolt required, as my family now consists of Mrs. Hayden, Misses Hester and Margaret Hayden and Master George Hayden, one year on the road to Tech.

—J. W. Howard writes from Costa Rica:—

I'm down in Costa Rica and Panama on a leave of absence from Tech trying to make a survey that will eventually decide the boundary line between the two countries. We are in camp. One other Tech man and three Cornell men are with me.

Niggers do all the lugging and manual work. We see wild hogs, monkeys, snakes,

all kinds of bugs, turkeys, tapirs, wild cats, and mountain lions. One of the snakes killed was twelve feet long. Hope to be back sometime but as yet do not know the exact time.

—C. B. Cox writes from Mabton, Wash:—

Not much news of interest from the Yakima Valley, as I have never seen a classmate in my nine years residence here.

The lure of these Yakima fruit orchards has diverted my attention from engineering for some time at least, and I am busy developing an 80 acre apple ranch for a company which I organized two years ago in the east.

At present things are rather quiet in the engineering line, which is one reason why I left the Reclamation service with which I was connected for seven years.

This is certainly a fine prosperous country, and I wish some of the fellows might join me in this neighborhood.

Among the appointments in the Smith College faculty for next year is the name of Edna D. Stoddard, B. S., instructor in horticulture.

—The marriage is announced of Miss Grace Berdena Summers to Fred Bickford Crosby at Pittsburgh, Pa., April 22. Mr. and Mrs. Crosby will be at home after the fifteenth of May at 630 Rugby Road, Schenectady, N. Y.—The marriage is also announced of Miss Frances Gilmore Greene to Ralph H. Nutter at Beach Bluff, Mass., on May 4. Mr. and Mrs. Nutter will be at home after July 1 at 21 Mostyn St., Beach Bluff, Mass.—The engagement of Miss Mary S. Polk of Louisville, Ky., to Howard Scott Morse was announced on April 6.—At 6 P.M., on June 4 a small but select group of '03 men gathered for dinner at the "Tech Chapel." During the dinner the newly elected officers of the class were announced to be as follows: secretary and treasurer, five years, Myron H. Clark; assistant secretary and treasurer, five years, Ralph H. Nutter; advisory board, one year, C. S. Aldrich, I. F. Atwood, G. H. Gleason. After dinner the boys proceeded to Symphony Hall for their usual good time at the "Pops".

1904.

EVERETT O. HILLER, *Sec.*, United Printing Machinery Co.,
Jamaica Plain, Mass.

ADDISON F. HOLMES, *Asst. Sec.*, 7 Holborn Street, Roxbury, Mass.

Though the class has done fairly well to date on the matter of Alumni Fund, the secretary wishes to add a word to the letters already sent out by the committee. "Mert" Emerson the chairman, is doing much work and devoting a large amount of time to this work and it is just squarely up to us to do our part. That part is simple and is this:—Sign our pledge cards for the largest amount that we can conscientiously afford each year and mail them to the Alumni Fund Committee Mass. Inst. Tech., Boston. Whatever we pledge may be paid in five yearly installments and on the

basis of ten dollars for each year since our graduation this is only eighty dollars total or sixteen dollars per year. Surely this is not too much to ask for the institution which gave us much of our earning power and to which we shall be proud to send our sons when it has been enabled to hold by virtue of our own efforts in this very matter, the position of leader in technical education, unhampered by the millstones of poverty, inadequate equipment and under-paid Faculty and instructing staff. Once more and in the name of the loyal spirit of '04, let us sign our pledge cards and send them along.—We have from "Pret" Smith the happy news of the arrival of "Pret" Jr. Congratulations and best wishes for the new arrival and his parents. Following is part of his letter quoted directly:

I could not help but smile when I read Dave Elwell's letter in the last number, knowing Dave as I do I can hardly imagine him playing bridge and poker.

I expect to be in Boston from July 11-17 for the leather fair and may see some of the fellows. Family and business cares prevent my getting East very often and when I do I have, as usual, so much to do in such a short time that I really get no chance to look up anyone.

—On June 15 Fred Farrell was married to Miss Helen Irma Gilbert, daughter of Mr. and Mrs. W. H. Gilbert of Springfield, Mass. They will be at home after Sept. 1, at 17 Woodsville Terrace, Springfield, Mass.—The announcement is made of the marriage of Robert Faulkner, to Miss Sara Hiester on May 22, at Lebanon, Pa.—Edgecombe Course II, has made a fine record in the Southwest with the Santa Fé and is a recognized expert on the bonus system and other modern methods of management. The following letter just received from him will be of interest:

After very nearly eight years of service for the Santa Fé Railway, I have left their employ and have thrown my lot in with the Emerson Co., efficiency engineers. Am at the present time in La Porte doing the preliminary work on a contract which we have closed with the M. Rumely Co. Business is good and future prospects are bright.

My address for some time to come will be La Porte, Indiana, care of M. Rumely Co.

Charlie Haynes has accepted a responsible position with Mechanical Rubber Co., of Cleveland, Ohio. He will have charge of laboratory and compounding departments, combining in his work, scientific investigation and department management. In both of these branches he had had exceptional training with the Boston Woven Hose and Rubber Co., as well as with other large concerns in the same line. We are confident that he will meet with success for we know what manner of man he is.—"Tammy" Rockwood has kindly sent in, at the secretary's request, the following account of his late trip to the Canal Zone:

I was very sorry to be absent from the last '04 dinner, as I understand it was an exceptionally interesting one. At that time however I was on the water on my return from Panama.

I went down there purely and simply for a vacation and it was a very interesting trip. We sailed from New York on a Wednesday morning of the first week in January on the United Fruit Co.'s boat *Metapan*. We had a delightfully smooth passage to Jamaica and arrived there the following Monday. After spending a day in seeing the sights we continued on our way and reached Colon a couple of days later. There is little to see at Colon so we took the next train across the Isthmus to Panama. There we stopped at the Tivoli, the government hotel and where all the whites stop. I went with some friends from home who were bound for South America and spent a couple of days driving around the city of Panama with them and going out to Empire to visit some friends of theirs. This was very interesting as it gave us a good glimpse of the life down there among the American employees. After they had sailed, their friends very kindly included me in a fishing party down the Chagres River after tarpon. We started about twelve one night and took a train across to Gatun. We walked across the dam, stumbling over railroad tracks and rocks, and then through the jungle to a native village where we got a couple of native dugouts and guides. We paddled down stream for six or seven miles and managed to start fishing about sunrise, which comes at six down there. We did not get any bites so we kept on to the mouth of the river and learned there that the fish were all up in the spillway. So back we went and left our canoes at the place we had started from and then walked to the spillway. We saw plenty of tarpon there but did not get a bite, so I quit and went back to Empire and after seeing some friends went back to the Tivoli. There I found that on that morning's boat were two Tech men, Prof. Prescott and Horace Clark, '09. I spent the rest of the evening with Clark who left for South America the next morning.

Monday afternoon I had the opportunity of going through Culebra Cut in a motor car and then one of the engineers at headquarters showed me the models and some of the plans. Tuesday I walked through the canal from Culebra to Pedro Miguel and in the afternoon had another motor trip over the work at Pedro Miguel and Miraflores and to the quarry at Ancon. Wednesday I spent at Gatun seeing the locks, the dam, and the spillway. Thursday I sailed for home.

I had a number of letters of introduction that helped me in seeing the work, but although I know there are a lot of Tech men down there the only ones I saw on my whole trip were those I have mentioned and T. Howard Barnes, '81, who went down on the boat with me as far as Jamaica.

What impressed me most was the magnitude of the work and the efficiency of the organization handling it. The government does everything, runs the railroad, all the stores, the hotels, the clubs, and everything else. And the best part of it is that it is doing it as efficiently as we do it at home under private management.

With Panama an object lesson I am quite converted to a paternal type of government and to government ownership.

The canal is getting along fast and all the stories we hear about slides and the stability of the work are newspaper yarns. Of course more or less earth slides in from the sides of the cut, but when the water is let in that will help hold the dirt back and anyhow the natural slope of the earth will sometime be reached and the slides will stop. As to the stability of the dam a slope of one foot in eleven ought to make a pretty stable dam. The dam is now up to water level and is to go thirty feet above it. The locks on the Atlantic end have practically all the concrete in place and they are now putting in the gates and the machinery. On the Pacific end two of the three pairs have the concrete in and they are excavating for the third pair. Culebra cut is down to the bottom in places and is probably about five-sixths done.

I carried a camera along with me and got about ninety pictures which make an interesting record of my trip. It is a fine trip and a mighty interesting one and well worth taking for any one, whether an engineer or not.

—A. M. Holcombe is faithful as ever, for, having left the East, we find him located in St. Louis and active in Institute interests as secretary-treasurer of the St. Louis Society of the Massachu-

setts Institute of Technology. Holcombe is making good in his patent law practice, for which he has been well trained since leaving Tech.

The Panama *Morning Journal* gives N. M. Johnson the following send off:—No higher tribute can be paid a man than that accorded at the Washington Hotel Saturday night to Nat M. Johnson, supervisor of locks and dams at Gatun, who is leaving the Isthmus for good on May 3. One hundred and twenty-five men, who have worked with Mr. Johnson some time or other during his long stay of eight years on the Isthmus, sat down to a banquet the like of which has not been given here since the resignation of Mr. Stevens. The banquet was a success, if attractive souvenir programs, elaborate decorations, a sumptuous menu and plenty of liquid refreshment, properly frappeé, can make any banquet a success.

But it takes more than this to make a banquet and this affair had plenty of that without which a stag dinner is sure to fail; it was fortunate in its toast list. A galaxy of silver-tongued orators, raconteurs and poets, performed unblushingly before their fellows of the locks, the dams or the Atlantic Division offices. With Major Harding as toastmaster, the flow of wit and reason started off with a rush. A pleasant surprise came to Mr. Johnson at the very beginning of the evening, when Major Harding, the toastmaster, announced that in recognition of his efficient services the supervisor of locks and dams had been promoted to the position of superintendent. This honor and increase in salary which goes with it and which will be applied to Mr. Johnson's vacation rate of pay is in recognition of his long and valuable services in the building of the locks and dams at Gatun.

—Henry Warren (Harry) Stevens was married on the evening of May 29 to Miss Marion Dana Rice at Allston, Mass., the home of both. A number of Tech men were present, Ed. Parker, '04, serving as best man. The heartiest best wishes of '04 are extended to "Steve" and Mrs. "Steve."

1905.

GROSVENOR D'W. MARCY, Sec., 246 Summer Street, Boston, Mass.

The first inter-class bowling match of M. I. T. Alumni was held as per schedule on the night of April 5. Our class met 1902 for joint supper at Bova's, and adjourned shortly before eight o'clock to the Chauncy Alleys. There were three teams of five men on each side, and after a few impressive preliminaries by '02 the rolling began. After the first string it looked like a walk-over for '02 as they took two out of three with a total of 1253 to 1186. But by good team work, and a clever bunching of hits by Goodale, we took all three in the second string. It was nip and tuck during the last

round, but Dickerman managed to get two strikes in succession, and pulled his team out of danger. An interesting point, and one typical of '05, was that Piggy Bartlett's team, which was the scratch team, won all of its games. It shows you are safe in banking on an '05 team, even if you haven't seen them perform. The score is given below.

1	Ball	88	83	76	247
	Manter	78	69	71	218
	Dickerman	82	87	106	275
	Ayer	73	74	80	227
	Farrington	73	83	70	226
		<hr/>	<hr/>	<hr/>	<hr/>
		394	396	403	1193
2	Bartlett	90	71	92	253
	Wentworth	84	87	89	260
	Gardner	71	89	78	238
	Coffin	63	75	63	201
	Fisher	78	77	92	247
		<hr/>	<hr/>	<hr/>	<hr/>
		386	399	414	1199
3	Kenway	72	78	65	215
	Goodale	92	108	86	286
	Goldthwait	82	83	86	251
	Riley	68	84	75	227
	Keith	92	73	88	253
		<hr/>	<hr/>	<hr/>	<hr/>
		406	426	400	1232
Opponents totals		<hr/>			
		3624			
		428	376	393	
		380	391	407	
		445	393	418	
		<hr/>			
		3631			

It will be seen that '02 won the total pinfall, which counted two points but the games stood 6 to 3, so we won the match by a score of 6 to 5. '02 has challenged us for a return match next winter, and it has been accepted.

'05 men around New York had another enjoyable dinner, on March 26, at the Tech Club of New York. Fouhy, Schmeisser, Richards, Gabriel, Davis, Shapira, Poole, Whitman, Whiting, Sullivan, Saville, Rhodes, Crosby, and T. M. Gunn were present. Special cheers were given, and a letter of appreciation sent Presi-

dent Maclaurin upon the announcement of the gift of Tech's anonymous benefactor. Ros Davis kept things lively with the old Show music, at the piano. Gabriel took in the dinner during a short stay in town before returning to Alaska.

'05 men met at Bova's Cafe for supper before the Pops and were joined by others at the hall until our number was about thirty. The Pop concert was especially enjoyable, as a reading of the account in this number will show. It was not so boisterous, perhaps as in previous years, but more marked with the good spirit of getting together, and the pleasure of seeing old friends long absent. This pleasure increases every year, and justifies any effort made to be there. Roy Allen, from Mexico; George Hool, from Madison, Wis.; and Charles Starr from Washington were our members from the greatest distance. Remember the big reunion in 1914, you fellows who are a long way off, and commence laying pipe to be here. We will call it our decennial celebration, and it will add ten years to your life to be here.

Robert H. W. Lord and Miss Rebecca Choate Poole were married on June 12, at Westbrook, Me. They will be at home after September 1, at 136 Main St., Gorham, Me.—Edward T. Steel and Miss Edith Rawson Janes were married on June 15 at Brooklyn, N. Y.—P. J. Sullivan writes that he has won a Phi Beta Kappa, Miss Anna M. Gilman, of Everett, Mass., Boston University '07, and expects to be married in the fall.—It has been noticed that Albert Prescott was frequently called to Washington on business, so all '05 men at the Pops were pleased when his engagement to Miss Emily Rider, of that city, was announced. This marks a romance beginning two years ago at Southport, Me.—James E. Barlow announces the birth of a daughter, Esther Manson, on March 14.—Herbert Phipps Kenway was born June 8, to Mr. and Mrs. H. W. Kenway.

"Piggy" Bartlett is acting chief of the U. S. Food and Drug Inspection Laboratory, at Galveston, Texas. Just after he left, Walter Clarke decided to come back to the Fore River Shipbuilding Co. There is probably no connection between the two, but the '05 Boston Club is lamenting that they cannot both be here to bring their usual cheerfulness to our meetings. Bartlett's address is Old Custom House, Galveston, Texas, and Clarke's, 32 Broad St., Weymouth, Mass.—Otto W. Fick, who left after our second year, is back at the 'Stute after his degree. He says it is hard to get into the harness and study again after eight years, but expects to get through next year.—Wm. H. Beers is now with the Birmingham Water Works Co., Birmingham, Ala.—Chiusuke Suyehiro is a professor in the College of Engineering, Imperial University of Hyushui, Fukuoka, Japan.—George I. Rhodes has left the Interborough Rapid Transit Co., to go with Mr. Philip Cabot, 18 Tremont St., Boston. He expects to be located in Fall River most of the time, address 14 Bedford St.—

Bill Green is now with the Diamond Match Co., at Barberton, Ohio.—Ros Davis has left the Singer Mfg. Co., to take the position of superintendent of grounds and buildings, Princeton University. He "Belongs to the Janitor's Union" now in good earnest, and may be addressed at University Offices, Princeton, N. J.—Miss Mildred Wheeler is attending Summer School at Columbia University, address 158 West 106th St., N. Y.—Roy Allen has left his mine pending the straightening out of Mexican affairs, and is spending the summer with Charlie Clapp on his Geological Survey work in Vancouver.—Joe Daniels wrote from Seattle that Roy and Charlie called on him on their way out, and that he expected to see B. L. Johnson about July 1.—Carleton Atwood writes that he has just finished a 600 K. W. plant for making sodium nitrate, down in Chile. His wife and he are well and happy, but would enjoy being at some of the 'Stute gatherings, and plan to be at the next big reunion, which will be in 1914.—David Collins is chief draftsman, P. R. R. Penn. Station, New York City, residence, 130 Grant Ave., Richmond Hill, N. Y.—Miss Alice Rohdé is at Bayerische Str., 24, Berlin, W. Germany.—A. H. Howland sends his new address as 1837 Vernon St., N. W., Washington, D. C.—Frank Carhart writes on a good-looking "Hydraulic and Irrigation Engineer" letter head that he still has the same unbounded spirit of and for Technology as he always had, and sometimes when he is not too busy irrigating he is going to write an account of himself.

John H. Flynn and Edwin M. Lines have incorporated the Lines-Flynn Co., with headquarters at 50 Church St., New York, and shops at Woodbridge, N. J. Flynn is president, and Lines secretary-treasurer. The company is engaged in jobbing-manufacturing, repairing and selling railroad and contractors' equipment. Special arrangements are being made at the Woodbridge shop to repair and "park" the released equipment from the Canal, in the purchase of which the W. H. Pickett Co., of Philadelphia, is interested. Flynn recently resigned the position of mechanical engineer for the Isthmian Canal Commission, with which he has been connected since graduating.

The secretary has received many interesting letters in connection with our effort to put '05 where she belongs on the Alumni Fund. All of them express keen interest in the new era of Technology, many of them say how glad they are to help in the good cause and wish they could make their subscriptions larger, others say they will subscribe soon, and want us to know they are interested. One very interesting and hopeful sign is that a lot of these letters and subscriptions are from fellows who have not taken a great apparent interest before, showing that the class is well stirred up, and indicating that when the rest of the fellows who have been dilatory so far, wake up, that we will not have to be ashamed of our showing. This REVIEW probably contains a later table of class

standings than at this writing, but as yet barely a fifth of our class has subscribed. Every '05 man should read carefully every article in this number, and learn how vital it is that a large per cent. of the alumni show their belief in Tech by subscribing some amount, and then if he has not subscribed, go into executive session with himself and a pledge card.

1906.

RALPH R. PATCH, *Sec.*, 15 Lincoln Street, Stoneham, Mass.

The secretary regrets to report the death of his daughter, Linda Vaughn Patch, aged four years, who passed away after a long serious illness. On this account the affairs of the class have not received proper attention during the past few months.

We hear that Claude S. McGinnis has been appointed a member of the teaching staff of the University of New Brunswick in the department of physics and electrical engineering.

Word has been received of the appointment of Samuel A. Greeley as assistant engineer in the sewage disposal division of the sanitary district of Chicago.—Samuel Gideon, instructor in descriptive and architectural drawing at M. I. T. has been giving instruction and designing new buildings for the State College of Texas.—S. T. Carr has been for some time in Honolulu as sales engineer for the Hawaiian Electric Co. He writes as follows:

There are six or eight Tech men here, who are members of the University Club. The Hawaiian Islands are well advanced in all branches of engineering, caused principally by the progress the planters have made here in the irrigating and milling work of the sugar industry. We do practically all the electrical work in the islands which means also that a fellow has to do a good deal of the allied branches such as civil, mechanical and hydraulic engineering. It is a fine country to live in, although of course it is far different from the States.

—W. J. Deavitt, Course III, worked with the Canadian Copper Co. 1906-07, Munroe Iron Mining Co. 1907. He has been with the American Smelters Securities Co. since 1907, being at last accounts superintendent of their property Minas Vita Grande y Ruexas, Villa Escobedo, Chih., Mexico. During the disturbances in his vicinity Deavitt has had all kinds of experiences, including a hold up by the desperados.—R. V. McKay has been with the Pennsylvania Steel Co., since graduation as learner, blast furnace foreman, assistant superintendent blast furnaces; and now is superintendent of blast furnaces at Steelton, Pa.—The engagement is announced of Henry A. Ginsburg, VI, to Miss Sadie E. Berman of Cambridge.—We also have the announcement of Malcolm Wight's marriage to Miss Susie M. Stevens, the 19th of June, at Wellesley, Mass.—Jimmy Root and Hinckley enjoyed the June breezes of Buzzard's Bay for two weeks.—An informal gathering of 1906 men near Boston was held at the American House on

Friday, May 24. Clark, Coes, Ginsburg, Griffin, Johnson, Kasson, Kidder, Patch, Rose, Trowbridge, Van Hook and Wetterer were present. After enjoying a real American House dinner we adjourned to bowling alleys where a match was rolled, the married and nearly married vs. the single men. The single men proved to be some bowlers and took all three strings. Coes, who happened to be in Boston, hearing of the gathering joined with a supply of '06 spirit.

On Tuesday, June 4, a few men dined at the American House before going up to Pops. Wetterer and Kidder reported for the committee on revision of the class constitution, a copy of which has been mailed to each member of the class for ratification. R. S. Clarke, C. L. Kasson and C. E. Hamilton were appointed to bring in nominations under the new constitution. We were well represented at the Pops, having twenty-two men present. Most of these were those located in or near Boston. J. A. Root was the only one from a distance. He was paying his first visit to Boston since leaving Tech and he said Boston certainly did look good. Root worked in Mexico, Oregon, Alaska and other places before going to Anaconda, where he is permanently located.

In recognition of his exceptional success in building up its foreign automobile trade, the Studebaker corporation has just announced the appointment of W. H. Lalley as foreign sales manager. In a field where others have failed by reason of inability to adapt their policies to meet the market, the Studebaker foreign business under Mr. Lalley's direction has constantly increased. There will be more Studebaker E-M-F and Flanders cars sold in England this year than there were imported American cars of all makes last year according to the Studebaker officials. After leaving the Institute, he became established for some time with the Scottdale Foundry Machine Company, of Scottdale, Pa., as general sales manager. Later he was for three years foreign manager of Kilbourn, Jacobs Company of Columbus, O.

The Boston *Traveler* says: Harry Merriam, M. I. T., who has been working for one of the largest of the wood pulp firms of Marquette, Mich., for the past three years, is in the East again for a few days. Harry acted as chemist for several Boston firms before going West and is having a busy time dropping in on all his friends in the four or five days' vacation he has taken.

1907.

BRYANT NICHOLS, *Sec.*, 10 Grand View Road, Chelsea, Mass.
HAROLD S. WONSON, *Asst. Sec.*, 149 East Main Street, Gloucester,
Mass.

☞ Note change in address of secretary.

I. *The Five Year Reunion.*

In the April REVIEW the statement was made that it depended upon the '07 readers of the message whether the great five year reunion should be a tremendous success or only a moderately good time. As has always been the case in the history of the class, the members have risen to the occasion, and the secretaries are able truthfully to say that the days spent at Bellingham were days that could not be improved upon for a grand good time, and for splendid arrangements for the comfort and pleasure of those who came. Many of those who did not come added much to the occasion also by writing letters which were read to the fellows present; so that the success of the reunion was due not only to the committee in charge, but to all who attended and to those who sent their personal messages.

The actual preparation for the great event on the spot where the festivities were held began on Friday, June 14, although the committee in charge had been constantly at work ever since last February. On this Friday, at 8.03 a.m., Wonson and Nichols, members of the committee, and Sam Coupal, who was in Boston on a vacation from his work in Mexico, left Boston for the town of Bellingham, Mass., where is located the twenty-five-acre farm of our honorary and honored member, Bursar Rand. Tents, dishes, food, tables, chairs, blankets, cots, and all sorts of articles too numerous to mention had been previously landed at the farm by the Technology automobile truck. Along with these three men came Mr. Robert C. Colton, who runs the Technology Union, and who was the steward for us, a cook, and five assistants. Within twenty minutes after the arrival of these men, the three members of the class were in their old clothes, and hard at work putting up tents, and Mr. Colton and his men were putting the kitchen (the Bursar's garage) to rights. Macomber arrived at noon, and Don Robbins and Lawrie Allen were on hand at 6.30 p. m. By night the big 40' x 20' eating tent, the eight sleeping tents, the wash tent, and the sanitary tent were erected, cots and blankets and pillows were in their places, and the "kitchen" was in "apple-pie order" with a cook stove in place, and the tables and dishes were set in the eating tent. The evening of Friday was spent by the six men present with the Bursar and his wife in the living room of the house, making plans for the coming days.

Saturday morning was taken up by the committee in perfecting



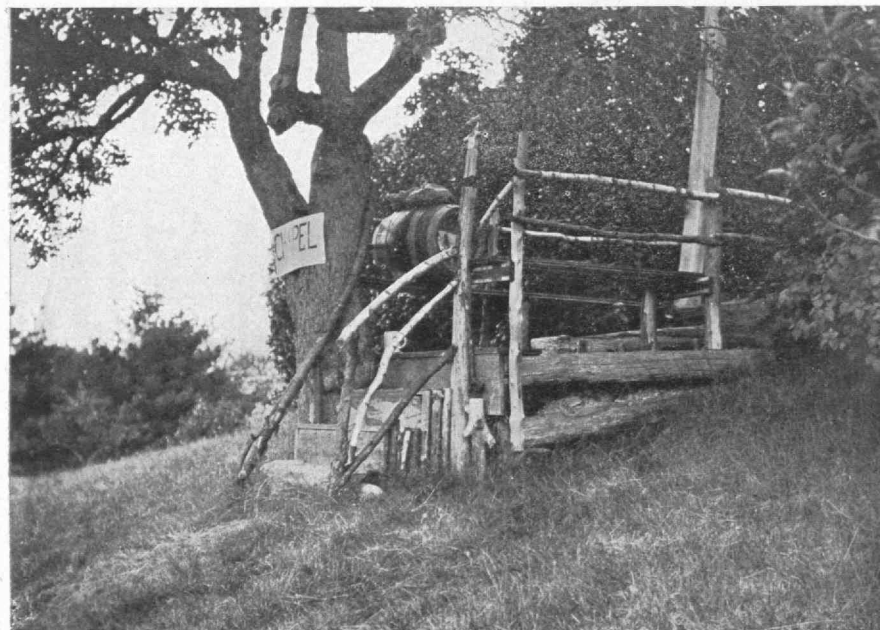
The Bursar's House showing tent fly over the front lawn



"Our host, his wife, daughter, and our steward, Robert C. Colton"



"The Bulletin Board"



"Chapel"

arrangements and getting all details attended to. J. C. Bradley from Waterbury, Conn., arrived at noon time. At 3.15 p. m. the men present went over to the railroad station to meet the bunch coming on the Boston train. Instruments belonging to the Tech band were in our possession, and we made a big noise but little music as the train pulled in, bringing our classmates. Twenty-two men came at this time, and they were escorted to the Bursar's house and to their tents, after a visit to "Chapel," which in this case was located in a shady, leafy arbor. No stated entertainment was necessary for the balance of the afternoon, as the men were so delighted to see each other after five years' absence that they were well content to simply smoke and talk and play a little baseball and stroll about. In the early evening we heard a war-whoop coming down the road, and soon into the yard rushed an automobile bearing "Stud" Leavell, Sam Marx, and John Frank, with a banner bearing the inscription, "1907 Reunion—Western Invasion". If ever three men had a cordial welcome, this was the time. After a most bounteous supper, we all spent the evening in the big living room and were entertained for a time by two vaudeville artists secured from Keith's Theatre in Boston—one a black face monologue artist and singer, and the other a magician. Singing and instrumental music closed the first evening.

We awoke Sunday morning to find it raining slightly, and by nine o'clock it was raining hard and continued so all day. This caused a good deal of disappointment at first, but by night we all agreed that it was a good thing, for we had much more opportunity for sociability and exchange of experiences than would have been possible if the day had been spent in sports, as had been planned. Incidentally, there were fewer lame arms and backs than would have existed if the day had been pleasant. The entire day was spent in the living room, reading, playing cards, talking and making music on the piano, the Victor Victrola, or the piano player. Five hours during the afternoon and evening were taken up by one of the most interesting features of the entire reunion—the reading of the letters which had been received from members of the class and the relating of personal experiences by those present. A brief class meeting was also held, various matters being discussed, as stated further on. Most of us went to bed by 10 p. m., but a self-appointed so-called "executive committee," consisting of Hosmer, "Kelly" Richards, Oscar Starkweather, and Jack Mc-Millin made life miserable for the rest of us until nearly 2 a. m. by their singing (?), horn-blowing, talking, shouting, and merry pranks. As Hosmer said, "When we have a reunion only once in five years, what is the sense of going to bed."

Monday morning dawned bright, clear, and very warm. Everyone was in the best of spirits after the quiet day on Sunday. A finely played baseball game occupied most of the forenoon, the

married men playing against the single men. Bursar Rand was the umpire, and his decisions were according to "Bellingham Rules," as he announced. Wonson was score keeper. A keg of beer was located near third base, and it was necessary for a man to reach that bag in order to make use of the stein. (At least, that was the rule at the beginning of the game, but as the heat increased, the Bursar became lenient). There were so many of the players who put up a fine article of ball that it is hard to pick out any one man who especially excelled. The score at the end of a regular nine inning game was 13 to 12 in favor of the married men. The story of the game in formal style follows:—

SINGLE MEN

	ab.	hits	total bases	errors	sacrifice hits	runs
H. G. Spear, c.	4	1	1	0	1	1
S. A. Marx, p. (r.f.)	6	4	5	1	0	1
J. M. Frank, lb	5	0	0	2	0	1
E. P. Noyes, 2b	5	4	8	1	0	4
J. S. Coupal, 3b	4	0	0	1	1	0
J. T. Mahar, ss	4	1	1	0	1	0
J. C. Bradley, cf	1	0	0	2	0	0
C. D. Howe, cf	1	0	0	0	0	0
O. L. Peabody, cf	3	1	1	0	0	1
L. C. Whittemore, lf	1	0	0	1	0	0
W. Hastings, lf	3	0	0	0	0	1
K. W. Richards, rf-p	4	3	3	1	0	3
Totals	41	14	19	9	3	12

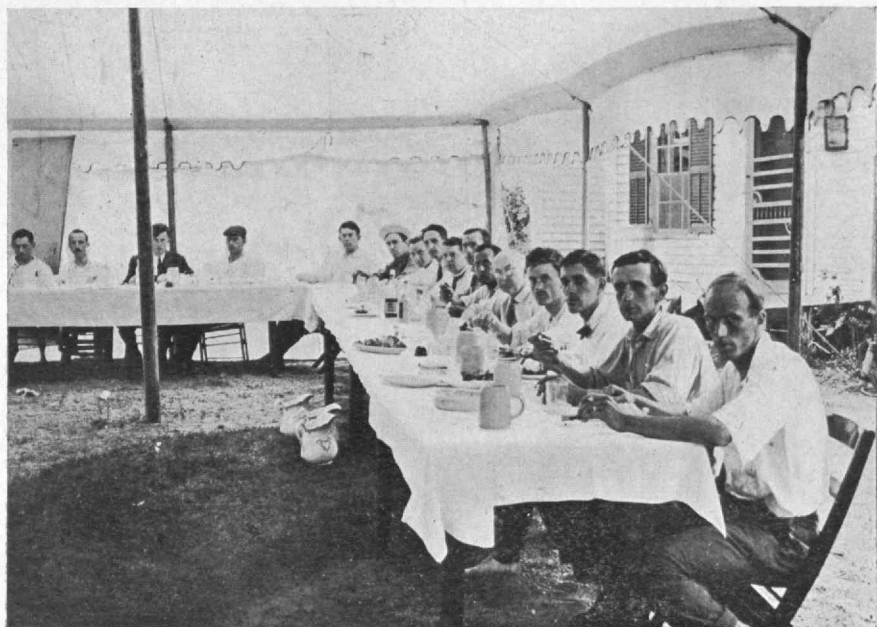
MARRIED MEN

	ab.	hits	total bases	errors	sacrifice hits	runs
H. B. Hosmer, c	5	4	5	0	0	3
M. E. MacGregor, p	3	1	1	0	1	2
G. S. Gould, lb	5	3	4	0	0	3
R. C. Albro, 2b	4	2	2	3	1	2
O. L. Starkweather, 3b	4	2	2	0	0	0
L. Allen, 3b	0	0	0	1	0	0
J. H. Leavell, ss	5	1	1	1	0	0
A. O. Christensen, cf	5	0	0	2	0	2
C. E. Allen, lf	5	2	2	2	0	0
G. E. Prouty, lf	3	0	0	0	1	1
Totals	39	15	17	9	3	13

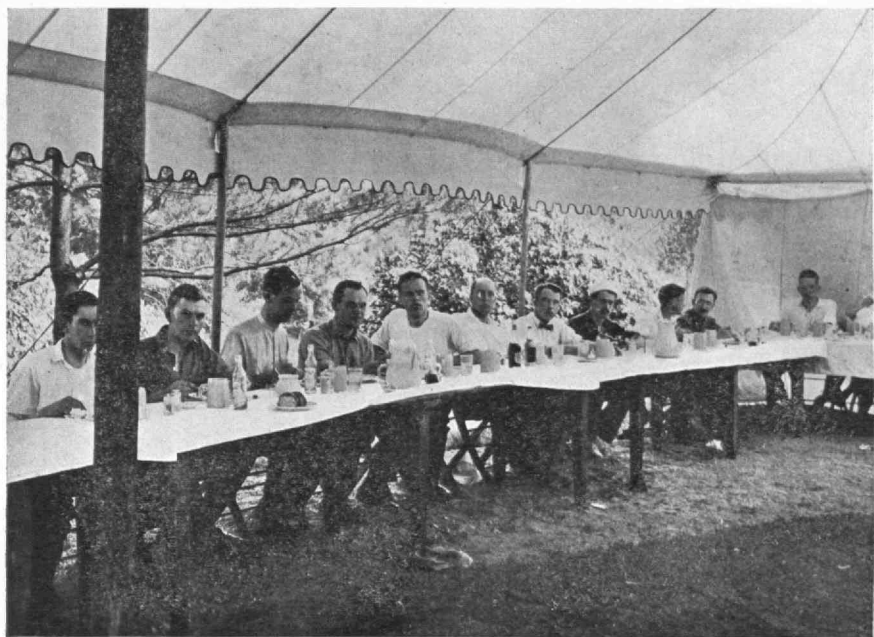
Innings	1	2	3	4	5	6	7	8	9	
Married Men	2	1	1	3	5	0	1	0	-	—13
Single Men	0	1	1	1	1	2	1	5	0	—12

Struck out by Marx 3, Richards 4, MacGregor 9; base on balls off Marx 2, Richards 0, MacGregor 3.

After the game was over, everyone was glad to keep rather quiet during the middle of the day, as it was very warm. About



"What! All gone waiter?"



The bunch eating "old fashioned" strawberry shortcake and cream



No Further Title Needed



"The Single Men's Baseball Team"

3 P. M. we all marched to the railroad station to meet "Ike" Litchfield, who came from Boston as the special guest of the class. This parade was a spectacle delightful both to the eye and to the ear. We all wore costumes consisting of caps made especially for the occasion, with red rims and gray crowns, in the style of a sort of mandarin hat, with long queues; and white shirts made of pillow cases slit so as to admit head and arms, so that we all looked like real Chinamen. The procession was headed by the band, which made a lusty noise. Behind the band came the balance of the fellows in a column of twos, dragging by two long ropes a light single-seated wagon, labelled "Police Dept." When the train drew up at the station and "Ike" appeared, he was given a royal welcome, and was escorted to the carriage, and was drawn in style to the '07 camp. Immediately upon our return, a field meet was run off under the direction of "Kelly" Richards, who also acted as score-keeper. The first event was a 110-meter dash. This was run in five heats, but unfortunately the final was never run, as a shower prevented. The winners of the various heats were as follows:—First heat, S. A. Marx, first; W. Hastings, second. Second heat, Bob Albro, first; Sam Coupal, second. Third heat, Gilbert Small, first; Stanley Wires, second. Fourth heat, L. C. Whittemore, first; H. B. Hosmer, second. Fifth heat, E. P. Noyes, first; Lawrie Allen, second. Time varied from 10 seconds flat to 10½ seconds (Bellingham time—subject to correction). The next event was a relay race between teams of married men and single men. Each man had to run once around the bases of the baseball diamond, and fifteen men ran on each team. The single men were the victors in this event. Following this came the high jump. After long and intense excitement Don Robbins secured first place (height, 6 ft. 8 in.) Lawrie Allen was second (6 ft. 7 in.) and Bob Albro and Hosmer were tied for third (6 ft. 6 in.) All of these heights are Bellingham standards. An untimely shower at this point drove all the men to their tents, and prevented the carrying on of any further sports, although a few men went in swimming and engaged in tilting contests in canoes, but no official record was kept of these stunts.

At dinner Monday night we had as our guests at the table, in addition to Mr. Rand and Mr. Litchfield, Mrs. Rand and her little daughter, Alice. After a most delicious meal, we gathered on the lawn in front of the Bursar's house and after several packages of fire crackers had been set off, proceeded to carry on a mock trial. Sam Marx officiated as judge, "Stud" Leavell was the prosecuting attorney, Jack McMillin was the attorney for the defendant, and Lawrie Allen was the bailiff. The first prisoner was Litchfield, who was accused of graft in administering the affairs of the TECHNOLOGY REVIEW and of holding too many votes in the meetings of the Association of Class Secretaries. Able arguments were presented on both sides of the question, interspersed

by frequent visits to the punch bowl, but the prisoner was finally convicted and was sentenced to be present at every five-year reunion which the class of 1907 holds in the future. At this point a "badger fight" was carried on under the direction of Leavell, which will be fully appreciated by Southern men who read this. For lack of space it cannot be fully described here, but will be explained in another publication soon to appear. We then resumed our seats on the front lawn, and proceeded to the trial of the Bursar on the charge of being disloyal to the class of 1907. He, too, was finally convicted, and the judge called upon Bailiff Allen to pronounce sentence. Casting aside the farcical side of the program, Lawrie reminded us of the continual and ever-increasing interest and loyalty which the Bursar has shown our class, and stated what we all feel—that we can never begin to repay him. As a slight token of our appreciation, he presented the Bursar on behalf of the class with a drinking set, consisting of a mahogany tray and a highball set and a cocktail set.

Several of the fellows returned to Boston that night, and the remainder spent the balance of the evening quietly. All except five or six left Bellingham at 6.30 the next morning, and by 9 a. m. the farm was deserted, except for Mr. Colton and his men who stayed behind to clean the place up and restore it to its normal condition.

There are several things which cannot be properly omitted from a report of the reunion, even though it be rather brief, as this is. First of all, a sketch showing the general layout of the place will doubtless be interesting.

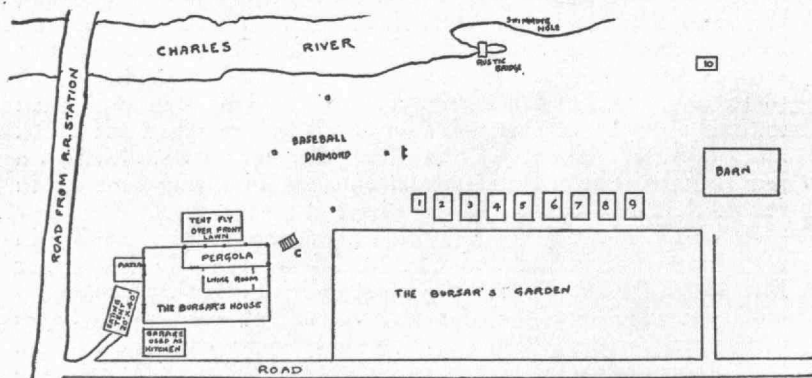
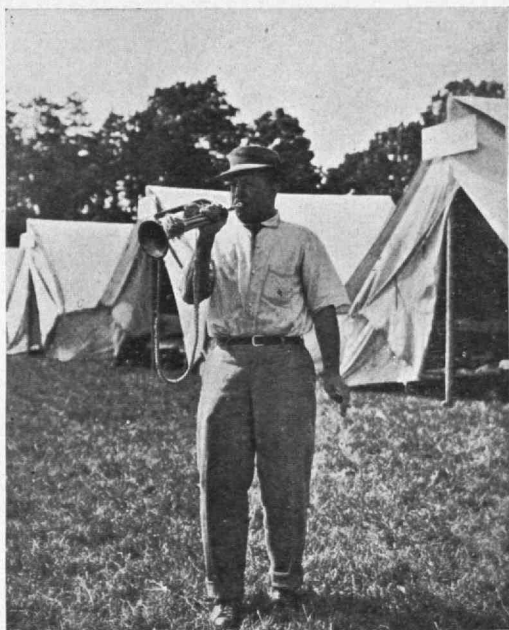
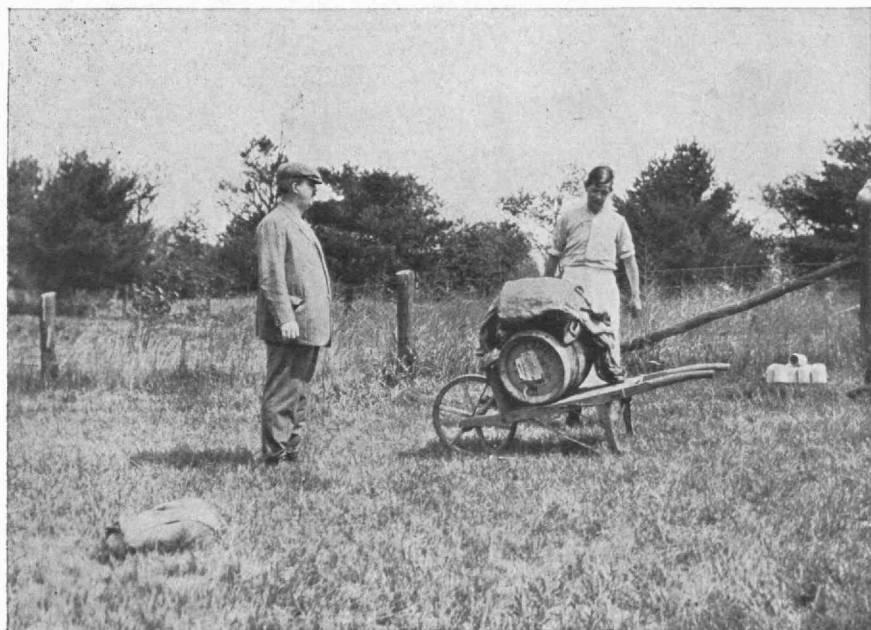


Diagram of the Camp

Among the amusing features of the affair were the signs which had been placed in various positions by the committee. The eating tent which was called "Waldorf Castoria." Over the front door of the house appeared "Bursar's Office." In the shady nook



"Sam Coupal, official bugler"



"Inducement to reach Third Base"



"Robert C. Colton, our Steward"



"Escorting Litchfield from Station, Monday afternoon"

marked "C" on the plan a keg of beer was always on tap, and this spot was named, "Chapel." The tent marked with the figure 1 was the wash tent and was entitled, "Revere Beach." The other eight tents in line with number 1 were sleeping tents and were called in order, "W. C. T. U." (occupied by Leavell, Marx, Frank, Coupal), "Stage Entrance," "The Cage," "The Triflevulgar," "Tramps' Home," "Power Plant," "Cleofan," and "Nearcan." The appropriateness of this last name is apparent when one realizes that the tent by itself marked with the figure 10 was the sanitary tent (which had for a name, "Harvard"). There were also various signs along the road from the station, marking the way to the house.

The names of the men who were present for at least a portion of the three days of the reunion follow:—Fred Morrill; J. C. Bradley, George W. Otis, Lawrie Allen, G. E. Prouty, John M. Frank, John M. McMillin, L. C. Whittemore, G. S. Gould, Phelps Swett, Warren Hastings, Stanley Wires, Sam Coupal, John Mahar, Alexander Macomber, O. L. Peabody, E. W. Bonta, Bryant Nichols, Harold S. Wonson, Don Robbins, Sam Marx, K. W. Richards, H. D. Reed, A. O. Christensen, Clarence D. Howe, "Tucky" Noyes, Grandville R. Jones, Bob Rand, H. G. Spear, Gilbert Small, Bob Albro, Ralph Hudson, George R. Norton, J. M. Barker, Kenneth Moller, H. B. Hosmer, Oscar Starkweather, Charlie Allen, M. E. MacGregor, "Stud" Leavell, W. F. Kimball, P. B. Walker, R. G. Kann, making a total of 43 men.

The committee in charge of the reunion consisted of Alexander Macomber, chairman; Lawrence Allen, Bryant Nichols, Donald G. Robbins, and Harold S. Wonson.

II. *Matters of Business and General Announcements*

First of all, the secretaries will state that some time before fall a book will be published giving a much fuller account of the reunion, and also a complete directory of the members of the class. Hence all personal notes regarding the doings of the fellows will be omitted from this issue of the REVIEW.

The following officers have been elected for five years:—president, Alexander Macomber; vice-presidents, G. S. Gould and Phelps N. Swett; secretary-treasurer, Bryant Nichols; assistant secretary, Harold S. Wonson; auditors, B. K. Sharp and Lester W. Brock; member of executive committee, Clarence D. Howe; nominating committee, Albert E. Greene, J. M. Baker, V. H. Dickson. The three proposed amendments which appeared on the ballots were adopted. The three changes thus made in the class constitution may be stated in brief:—(1) officers elected for five years instead of yearly; (2) executive committee given power to fill vacancies occurring in its own membership; (3) provision made that if a member of the class pays the treasurer the sum of

\$15.00 he shall be exempt from further payment of class dues. The total number of ballots cast was 87 out of a total of 300 sent out.

The report of the treasurer from July 1, 1911 to July 1, 1912, follows:—

RECEIPTS.		EXPENDITURES.	
On hand July 1, 1911	\$151.08	Printing	\$42.20
Class dinner Nov. 10, 1911	19.00	Postage	22.68
Class dues	160.00	Express and telephone	1.10
Interest and exchange	8.06	Alumni Association for clerical work	9.73
	————— \$338.14	Expenses of class representative on alumni council and secretary	17.16
		Class dinner Nov. 10, 1911 (25 men guaranteed)	27.65
			—————
			\$120.52
		Balance on hand July 1, 1912	217.62
			————— \$338.14

At the business meeting held at the reunion it was voted that resolutions be drawn up expressing in a fitting way our thanks to Mr. Rand for his hospitality and all his kindness to the class. Also that proper resolutions be drawn up in memory of the deceased members of the class (Archibald Prescott Fuller, March 7, 1908; Edward William Hamell, June 30, 1909; Edward Pendleton Hart, January 10, 1908; Malcolm McLeod, 1906; Carroll Fitch Story, 1909.) A vote of thanks was also taken for the work of the committee in arranging the reunion.

The result of the canvass regarding salaries received by the members of the class follows. 106 salary slips were returned to the secretary. As is always the case, the average salary obtained is probably too high, as the small salaried man is not so likely to report as the high salaried man. The aggregate yearly earnings of the 106 men is \$214,964, making an average of \$2028 per head. The median salary, that is, the salary of the man numerically half way between the highest and the lowest, is \$1800. There are 59 men below the average and 47 above the average. The lowest salary reported is \$600, and the highest income is \$6000, although since these figures were compiled, it has been reported that one man receives a salary of \$7000, but that figure is not included in this table nor in the averages above mentioned. The figures in detail:—

Incomes	Number	Incomes	Number
Under \$1000	4	\$2200 to \$2299	7
\$1000 to 1099	4	2300 " 2399	3
1100 " 1199	1	2400 " 2499	6
1200 " 1299	5	2500 " 2599	4
1300 " 1399	6	2600 " 2699	0
1400 " 1499	7	2700 " 2799	2
1500 " 1599	8	3000 " 3499	5
1600 " 1699	10	3500 " 3999	6
1700 " 1799	0	4000 ———	2
1800 " 1899	11	5000 ———	1
1900 " 1999	0	6000 ———	1
2000 " 2099	4		
2100 " 2199	9		

1908.

RUDOLPH B. WEILER, *Sec.*, Care The Sharples Separator Company, West Chester, Pa.

CHARLES W. WHITMORE, *Asst. Sec.*, 1870 Beacon St., Brookline, Mass.

I. *On the part of the Secretary*

A note of thanks has been received from Mrs. Youngerman, for flowers and sympathy of the class in her recent bereavement.

On March first the fourth annual letter was mailed to all members, but on account of an omission on the part of the office, one card was left out. This was mailed later which explains why two envelopes were received by each member. The secretary wishes to apologize for his tardiness in answering many letters and remittances, which was due in part to the arrival of a son on March 11 and the fact that some important business matters claimed much of his time.—On May 25 your secretary attended the outing of the Technology Club of Philadelphia at Woodbury, N. J. The only other '08 man in attendance was Besselievre.—“Clif” Cochrane has left the Factory Mutuals to become superintendent of the Sweethport Extract Co. Inc., at Damascus, Va.—H. R. Calloway is now vice-president and assistant chief engineer, Ed. H. Calloway Engineering Co., engineers, clay specialists and brickologists, 50 Church St., New York.—Sam Daddow is in business for himself running an automobile garage business in his home town, St. Clair, Pa.—Leo Loeb is with the Naval Experiment Station, Annapolis, Md., as senior mechanical engineer.—Dwight Dickerson, Jr., is acting-assistant surgeon, U. S. Navy, 23 Pickering Bldg., Cincinnati, O.—“Bunny” Ames is back from South America and can be reached through his old address, 15 Cherry Street, Medford, Mass.

—Announcement comes from Newton of the engagement of Miss Grace E. Perry of that town to Frederick A. Cole.

We regret to report the death of Irving F. Jackson on April 23, 1911, at Los Angeles, Cal. He is survived by a widow and a two-year-old son.

II. *On the part of the Assistant Secretary*

The fourteenth bi-monthly dinner was held Tuesday evening, May 14, at the Boston City Club. Although only thirteen signified their intention of coming, eighteen showed up. The dinner was good and enjoyed by all.—Gerrish told us the news of the progress of the Technology Fund. We next heard of the doings in Ohio from J. E. Hale, who is with the Goodyear Rubber Co., at Akron. Hale was in Boston scouting for promising seniors to take back with him after graduation. Several of the other fellows made a few remarks, mostly "stories." Bowling took up the rest of the evening as usual and for the first time in a long while the married men were defeated. The following were present:—A. W. Heath, Sherwood Hall, G. E. Freethy, H. T. Gerrish, L. B. Ellis, C. W. Boylston, LeRoy Hammond, S. C. Lyon, Chas. L. Batchelder, Ralph J. Batchelder, C. W. Clark, A. M. Cook, W. D. Ford, A. B. Appleton, B. S. Leslie, B. W. Cary, J. E. Hale and Charles W. Whitmore.

There were about thirty 1908 men at the Tech Pops, which was a fair showing. There were many fellows living near Boston some of them "regulars," conspicuous by their absence. "Al" Place came the longest distance, all the way from Seattle.

III. *Matrimonial*

John S. Barnes was married August 14, 1911, to Miss Hazel VonVleck of Jamestown, N. Y. Barnes is with the Merrell-Soule Co., Syracuse, N. Y.—A. A. Longley was married on April 16 to Miss Lucy F. Bayley at Jamaica Plain, Mass.—Karl R. Kennison was married on June 1 to Miss Florence M. Foster at Providence, R. I.

IV. *Letters*

We have the following from Melville B. Hall under date of March 6 from Caruthersville, Mo.

Your notices and occasional duns are always received with a warming of the heart for the dear 'stute. I had one of the best good shocks I ever received the other day. I drilled into the Mound City (Ill.) Light & Power Co.'s offices in Mound City (down in Egypt—right near Cairo) when I looked up and saw a perfect 10 x 14 photograph of Trinity Square looking from the roof of Walker up toward the Library. It was one of a series of "Good Municipal Lighting" that a supply house is sending out. It sure looked good. I found the very spot where my room-mate got a crack on the bean (thereby acquiring a \$5 bill for new glasses and a headache) from a mounted cop way back in November, '04. That old battle always gets my blood up, tho' all I got for a relic was a Harvard cap. If I remember right it was old Bill Adams who beat it down Boylston Street with a helmet in his hand and a short fat cop just 3' 2" in the rear. Bill finally winded him and got a clear semaphore. I hope to get to see the old crowd in a year at least. Brown '08 has patented a reinforcing bar bender that is bringing him some money. He is with the city of St. Louis Water Department. I am now with the glorious Westinghouse and in love with my job. Get home two days a week so I am not a real drummer.

—H. C. Schriefer writes from the St. Lasar Copper Fields, Fort No. 2, Orenburg & Tashkent R. R., Siberia, Russia as follows:

Enclosed find check for \$5.00 for class dues and also salary envelope. Am out of the world here in a way and seldom receive letters, as they always go astray. Four hundred miles from the railroad in a portion of Siberia known as the Kirghese Steppes, which is practically a desert. The Kirghese are nomads and keep moving around all the time, but are fair workers. The Russians working here are more on the convict or forced exile class and a tough bunch of subjects. Transportation is done by camels and it takes a long time to get supplies here from Moscow and St. Petersburg. I hear from some of the '08 fellows once in a while, but from now on I will promise to do a little more towards keeping in touch with you.

We have the following from Leo Loeb under date of March 17:

The very pathetic appeal at the end of the circular letter of the 1st leads me to believe that '08 news must be extremely scarce. Since I last consumed much space I have made a change or two—in fact changing jobs has been such a regular thing with me that some people think I can't hold one longer than six months.

Up to the 25th of last January I was assistant steam engineer at Cambria Steel Co. Johnstown, Pa., but gave that up to take a much better place as senior mechanical engineer at the Naval Experiment Station located here (Annapolis). The work is entirely experimental; investigating the merits and economy of machinery and appliances used by the Bureau of Steam Engineering in the equipment and maintenance of naval vessels. The plant is up-to-date and very interesting and the latch string is out to any '08 man who happens to be near Annapolis on business or on a honeymoon.

I have met a number of Tech men either in representatives of machinery under test or engineering experts in various branches of the naval service, but so far have not come across any of our bunch.

Extract from letter received from F. H. McGuigan, Jr., Windsor Hotel, Montreal, Canada, under date of May 27, 1912:

I am just returning to work after an absence of *sixteen months* of rather expensive illness and convalescence in the Adirondacks. Kindly remember me to any of the boys whom you see and give them my address in case they may be passing through Montreal. Am feeling better mentally, morally and physically than ever before and hope soon to make up for the lost time.

V. New Addresses

William A. Adams, care Bureau of Lands, Manila, P. I.—Monroe Ames, 15 Cherry St., Medford, Mass.—Carl H. Bangs, Submarine Signal Co., 255 Atlantic Ave., Boston, Mass.—Howard E. Batsford, care Roessler & Hasslacher Chem. Co., Perth Amboy, N. J.—E. J. Beede, 139 Lincoln St., Boston, Mass.—George M. Belcher, W. H. McElwain Co., Manchester, N. H.—H. H. Bentley, care Schmidt, Garden & Martin, Chicago, Ill.—H. W. Blackburn, University of Vermont, Burlington, Vt.—Donald Bowman, Commonwealth Edison Co., 28 North Market St., Chicago, Ill.—James M. Burch, Jr., care Farley & Loetscher Mfg. Co., Dubuque, Ia.—Harry L. Burgess, American Tel. & Tel. Co., Engineering Dept., New York, N. Y.—Walter E. Caldwell, care W. E. Caldwell Co., Louisville, Ky.—C. J. Carter, University of Me., Orono, Me.—

Burton W. Cary, 53 State St., Boston, Mass.—Langdon Coffin, Samson Cordage Works, 88 Broad St., Boston, Mass.—LeSeur T. Collins, 53 State St., Boston, Mass.—S. H. Daddow, St. Clair, Pa.—Allston Dana, Empire Bridge Co., Elmira, N. Y.—Gregory M. Dexter, Engineering Dept., Oregon Short Line R. R., Desert News Bldg., Salt Lake City, Utah.—W. Fred Dolke, Jr., care E. P. T. Graham, 20 Beacon St., Boston, Mass.—A. S. Douglas, Yadkin River Power Co., Rockingham, N. C.—R. E. Drake, 729 Boylston St., Boston, Mass.—Alan F. Edge, care Corn Prod. Refg. Co., Argo, Ill.—Alexander Ellis, Jr., 20 Kilby St., Boston, Mass.—Leslie B. Ellis, Metropolitan Water Works, 1 Ashburton Place, Boston, Mass.—Paul A. Esten, Page Belting Co., Concord, N. H.—Raymond W. Ferris, 55 Rose Ave., Akron, O.—W. D. Ford, Room 465, J. Hancock Bldg., Boston, Mass.—W. Cummer Folsom, Health Dept., City Hall, Cincinnati, O.—V. M. Frey, J. E. Baker Co., York, Pa.—Ferdinand J. Friedman, 222 E. 41st St., New York, N. Y.—Arthur L. Gardner, Roessler & Hasslacher Chem. Co., Perth Amboy, N. J.—J. C. Gaylord, University of S. Cal., Los. Angeles, Cal.—Herbert T. Gerrish, 247 Atlantic Ave., Boston, Mass.—Charles A. Gibbons, Jr., 33 Plains St., Taunton, Mass.—Wm. B. Given, Jr., 30 Church St., New York, N. Y.—George T. Glover, Allis-Chalmers Co., Schofield Bldg., Cleveland, O.—Harold W. Griswold, U. S. Engineer Office, Tuscaloosa, Ala.—Harold P. Gurney, National India Rubber Co., Bristol, R. I.—Joseph W. L. Hale, 1120 13th Ave., Altoona, Pa.—Sherwood Hall, Jr., 372 Boylston St., Boston, Mass.—Samuel F. Hatch, 108 Belvidere St., Boston, Mass.—Arnold W. Heath, Room 907, 7 Water St., Boston, Mass.—L. B. Hedge, Box 155, East Ely, Nevada.—Robert D. Hennen, Morgantown, W. Va.—Ira G. Hersey, Jr., 53 Wareham St., Boston, Mass.—B. B. Holmes, care Stone & Webster Engineering Corp., Bellingham, Wash.—H. W. Hoole, Hardwood Products Co., 506 Hume-Mansur Bldg., Indianapolis, Ind.—Walter F. Hudson, School of Railway Signaling, Utica, N. Y.—Alfred R. Hunter, The Noiseless Typewriter Co., Middletown, Conn.—Ralph Johnson Batchelder, Room 911, 40 Central Square, Boston, Mass.—W. A. Armour Johnston, Jr., S. S. White Dental Co., Prince Bay, N. Y.—Charles F. Joy, Jr., 61 Shurtleff St., Chelsea, Mass.—John A. Kydd, Riverside Worsted Mills, Providence, R. I.—J. H. Locke, Clark & Ewing Ave., St. Louis, Mo.—A. A. Longley, 627 Ingleside, Chicago, Ill.—Orrin S. Lyon, 45 Autumn St., Everett, Mass.—J. McGowan, Jr., 32 N. Front St., Camden, N. J.—Peter F. McLaughlin, Pittsfield, Mass.—G. M. J. Mackay, Research Lab. G. E. Co., Schenectady, N. Y.—R. E. Manning, 31 Milk St., Boston, Mass.—Donald H. Maxwell, 1417 Hartford Bldg., Chicago, Ill., Lincoln Mayo, 11 Robeson St., Jamaica Plain, Mass.—W. H. Medlicott, 84 William St., New York, N. Y.—Everett H. Newhall, Revere Sugar Refinery, E. Cambridge, Mass.—H. S. Osborne, Am. Tel. & Tel. Co.,

15 Dey St., New York, N. Y.—E. A. Plumer, Eng. Dept., Am. Tel. & Tel. Co., 15 Dey St., New York, N. Y.—Charlton D. Putnam, 353 W. Monument Ave., Dayton, O.—H. A. Rapelye, 500 Westinghouse Bldg., Pittsburgh, Pa.—R. I. Ripley, 348 Congress St., Boston, Mass.—Rens E. Schirmer, Newhouse Tunnel, Idaho Springs, Colo.—Edward J. Scott, Woburn, Mass.—H. R. Sewell, care Allis-Chalmers Co., 801 Wilson Bldg., Dallas, Texas.—J. B. Stewart, Jr., care Griffin Wheel Co., Chicago, Ill.—L. W. Thurlow, Bureau of Science, Iloilo, P. I.—Channing Turner, Geneva, Ill.—H. E. True, Central Soledad, Cienfuegos, Cuba.—Harry Webb, Box 569, Memphis, Tenn.—Allen T. Weeks, Acushnet Process Co., New Bedford, Mass.—Lester S. Weeks, Ponce Ry. & Light Co., Ponce, P. R.—Edgar I. Williams, American Academy in Rome, 68 via Nomentana, Rome, Italy.

VI. Results of Salary Canvass

Total number of replies received was 140. Of these 96 were on the graduate list and 44 on the non-graduate. One of the graduates replied, "No salary—a student." The average salary of the 95 graduate members, omitting the one mentioned above was \$1,764.03 and of the non-graduate \$1,864.36. The total amount reported was \$249,615, making the general average \$1,795.79. The gain over last year was, non-graduates, \$200.55; graduates, \$345.65; both together, \$312.74. The lowest salary reported by a graduate was \$900 and by a non-graduate \$520. The highest reported by a graduate was \$5,200, and by a non-graduate, \$5000. On the graduate list, 43 received more than the average and 52 received less. On the non-graduate list 13 received more than the average and 31 less. For all taken together 56 received more and 83 less than the average. The middle-man on the graduate list received \$1600, and on the non-graduate list \$1500.

ANALYSIS OF SALARIES, CLASS OF 1908

	Graduate	Non-graduate	Total
Below \$1000.....	3	1	4
1000 to 1199.....	8	8	16
1200 to 1399.....	19	10	29
1400 to 1599.....	17	6	23
1600 to 1799.....	5	2	7
1800 to 1999.....	14	5	19
2000 to 2199.....	14	1	15
2200 to 2399.....	2	1	3
2400 to 2599.....	5	2	7
2600 to 2999.....	1	0	1
3000 to 3399.....	4	4	8
3400 and over.....	3	4	7
Total.....	95	44	139

1909.

CARL W. GRAM, *Sec.*, care Walter Baker & Co., Ltd., Milton, Mass.

On June 4 at the Pops, the following men turned out:—Dick Ayres, Ben Dow, Fellows, Gilbert, Gram, Jackson, Bill H. Jones, Loomis, P. B. Lord, who has recently returned from Mexico with Mrs. Lord on account of the unsettled conditions, John McCarty, just back from the Southwest in search of a job, and so would not take even a beer, Martin, Reeds, Art Shaw, Heinie Spencer and Ernest Ware. We feel it our duty to publish, that Spencer was seen smoking a cigarette.—The secretary received an announcement of Sam McCain's marriage on May 28 to Miss Margaret Matthews of Dayton, Ohio; also B. Edwin Hutchinson, was married June 20, to Miss Helen Monks, at "Conanicut," Jamestown, R. I.—Mr. Daniel N. Swan, of Fort Myer, Va., announces the engagement of his daughter Nellie Frances to Lieutenant Fred M. Green, United States Army.—On June 17, Ted Chapman became the father of an 8½ pound son, Edward Prichard Chapman, Jr.

Letters

Lou Beers, who is with the Southern Ferro Concrete Co., Atlanta, Georgia, writes:—

I have spent the past two years in Florida superintending construction work in Jacksonville, Tampa and Daytona. I am at present just starting the erection of the New Ansley Hotel, in this city, a fifteen story reinforced concrete building 100 x 118 feet.

"Blank" enbuehler writes:

After I got my B. S., followed some duck's advice about "Go west, young man, go west," and here I have been for three years as chemist-in-charge of the vanillin department in the Monsanto Chemical Works. My work consists in overseeing the production of the vanillin by the men employed, and a little laboratory work, though the test chemists do most of that. I like the factory end of it much better and test tubes and beakers are fierce after large stills and pans.

A. K. Comins is in Chicago with F. C. Atteaux & Co., manufacturers and importers of aniline colors, dyestuffs and chemicals and says:

Have been employed as western sales manager of the above concern since last August.

Brad Dewey writes from the American Sheet and Tin Plate Co., Pittsburg, as chief of the research laboratory that he is:—

Working on research problems for this company, and hope to have a 1912 Course V as well as a Course X man with me in July. No sign of matrimony, or any such rash fliers;—date of death uncertain.

Under pressure, Jim Finnie loosened up in part as follows:—

When you ask for my address you are asking a great deal. You see I'm in charge of the Eastern territory now for my company and I feel as though travel were my

middle name. But Clinton is as safe an address as any, because my mother is there. This week I have been down at Atlantic City where the electrical jobbers were in convention. *Some time and place I assure you.* I noticed that the Walter Baker Co., is going to have a permanent exhibit just off the boardwalk so I shall expect to hear of your being down there soon.

Bob Hulsizer says he is

—engaged in the occupation of learning the practice of American Patent procedure from A-Z. At present writing I have about reached "G." I am not, however, ensconced within that "pale Holy of Holies" where "Angels fear to tread," the Government service, but am outside of that place of security. I have been, since September, 1910, with the firm of Byrnes, Townsend, and Brickenstein, patent lawyers, 918 F. St., N. W. Washington, D. C. . . . There are many old classmates of ours down here whom I meet occasionally and with whom I talk over old times when we used to sit on Rogers steps and survey the universe, the most prominent objects within the range of that survey being "Macks" and "Tech Chapel." Among others are D. G. Haynes, Myron Davis, F. M. Green, R. G. Wells, Hersey, Black and many older men.

Bill Kelly says in part:—

I had to start a new thesis last term because Dr. Freundlich with whom I was working left Leipzig to become a professor at the Technische Hochschule in Braunschweig. I am now working with Professor Bottiger and he is sure one fine man to work with. I am working on the electrolytic determination of the anions, especially the halogens, with a silver anode and mercury cathode. Of course it is also possible to determine the alkali metals with the same apparatus at the same time. I hope to have the work finished in another month and a half and to come up for my exams sometime between July 15 and August 1.

Provided everything goes well I then start for Ceylon to have a look at the rubber plantations there and then to Singapore, Straits Settlements, Manila, China, Japan, Honolulu, Frisco and home to God's only own country again.—Have played hockey this winter in St. Moritz, Berlin, Prague, Brussels and here in Leipzig.—At present I am enjoying tennis and golf in my spare time and when I am not doing that I am telling these fellows over here all that we are going to win at the Olympic games in Stockholm in July.

Here is one from Bert Peet who was at time of writing in Savannah, Georgia:—

I am glad to report that I have just sent a check for '09 dues to Shaw, my pledge to the Alumni Fund, and also paid my Alumni dues. I sincerely hope that '09 will come to the front in its share for the Alumni Fund. Am still with the Factory Mutual and enjoying my work. I began work in the inspector's department on December 1, 1910 and spent five months in the drafting room, then eight months in the laboratories. Since then I have been inspecting. I spent nearly all of last year in the middle west, and this spring have been in the south. About the first of July I expect to go to Canada for the summer and fall. In all my travels I have combined pleasure with work, and as I have always taken a kodak along, have quite a few pictures. Next winter I am going back home (Callao, Peru) for a four month's vacation. I shall be home in time for Christmas and shall find many changes as both my brother and sister are married, and my sister now has a baby. I am still single, and nothing in sight. Address in care of Factory Mutual Fire Insurance, Milk St., Boston.

C. S. Robinson says:—

To begin with, I wrote you about my surveying trip down in Florida last winter, and how I escaped being bitten by snakes and stung by grampuses and came north

again with a hair-lip and tanned so that nobody knew me. And since then, I have been sticking pretty close to the works, so that nothing startling has occurred. I haven't got married or even engaged, and I spend about all my spare time, which is very spare, consisting of a Sunday stolen now and then, in rambling over the states of New Jersey, New York and Pennsylvania on my trusty Indian Twin. I consider motor-cycling about the best form of recreation for a single man who lives in a city that there is. This is my third year at it, and I guess I have the bug permanently. My work here as assistant superintendent is largely executive, but I have a lot of research mixed in with it. The company has research departments who devise processes which they turn over to us to make practicable, and—believe me—its not always the cinch they expect.

Shippee writes from Baton Rouge, La.,—

Since March, 1911, I have been with the Baton Rouge Electric Co., a Stone & Webster organization which does the entire light and power, street railway and gas business of Baton Rouge. At present, I am superintendent of the Gas Department. I was married Sept. 22, 1911 to Miss Marguerite Lillian Foster at Boston, Mass. These two items I believe cover everything concerning me which would be of interest.

Molly Scharff says:—

Phifer Smith, Joe White and I represent '09 here, and are the mainstays of the weekly luncheons held on Saturdays by the Southeastern Alumni Association.

Wiswall, V, is in Fostoria, Ohio. He writes:—

I have nothing thrilling to report. As you may know I came to Cleveland about two months after graduation to go into the laboratory of the National Carbon Co. After a year and over at the Cleveland plant, I was transferred to the factory here as assistant superintendent. When they asked me to come here I had to dig out a map to find where the place was. It is about 35 miles south of Toledo in a country as flat as the Frog Pond on the Common on a calm day. However there are five real railroads here, which is one-half times as many as Boston has, so it is not such a dead place after all. The only real sad thing about this inland country is that you can only see the ocean once a year when vacation comes. I often envy you people around Boston. Boston is a great town and that's all there is to it. At our factory here we make motor brushes, lighting carbons, and electrodes. Downes' '04, is in charge of the laboratory at our factory and we are the Tech Club of Fostoria. Both of us are looking forward to the next quinquennial and have made up our minds to go even if we have to walk the whole 800 miles. Our friend Charley Field is at the company's Cleveland plant in the manufacturing end. Charley recently became the proud father of a very small Field who has been very properly named Charles Field, IV. Dyer, '09, is now publicity manager of the company. Hinckley, '08, is now at the company's plant at Niagara Falls.

Harvey S. Pardee has recently severed his connection with the Commonwealth Edison Co. and joined the firm of Miller & Pardee. They will engage in general illuminating and engineering practice with offices in the Chamber of Commerce Building, 133 W. Washington St., Chicago, Ill.

On July 1st, Bob Inglee began work for the Bemis Bros. Bag Co., St. Louis, Mo., in the power end of the business.

E. E. Wells, who was recently made superintendent of the Hawkins Point Works of the Davison Chemical Co., writes from Baltimore:—

Have been with the above company for about two years. They make only H_2SO_4 , Chamber process. The Curtis Bay factory is a new one, all steel and reinforced concrete construction;—output about 500 tons per day. I have charge of the Hawkins Point Works. It is the larger of the old plants—output about 125 tons a day. Not much chemistry in my work, it's principally using common sense in getting around break downs and other troubles.

—Walter M. Clifford was married on June 30 to Miss Helen Edelman Mooar, at Hyde Park, Mass.

In closing the secretary wishes to say that a few of the fellows got together at the Pops and decided to have some get-togethers this summer along the line of a Saturday afternoon outing at the beach, Riverside, or other convenient place. Fellows who are visiting Boston from a distance on their vacations would do well to notify the secretary in advance the date when they expect to be in Boston, thereby increasing the possibility of running into a young class reunion.

1910.

JOHN M. FITZWATER, *Sec.*, Industry, N. Y.

G. BERGEN REYNOLDS, *Asst. Sec.*, 142 Highland Avenue, Somerville, Mass.

Beginning the first of July a system of course secretaries is going into effect by which men in the same course will receive a reply-postal from the secretary of his course about four times a year. In this way the class will be kept in close touch with each, and through a personal acquaintance. This will not only mean more news for the REVIEW, but will greatly assist in distributing the work of securing class notes. The members of the class are asked to state their experiences similar to the note of Course III in the present issue. Will the member of the class who mailed Fitzwater his class dues of 1911 from Harrisburgh, Pa., and who forgot to sign his name, please notify him?

Gillis, whose father is mayor of Walla Walla, writes from that city as follows:

I left the railroad at Christmas, having finished the work there, and loafed around here for about six weeks. I am now with the State Highway Department on a couple of miles of oil-bound macadam that they are putting in out here. I have short hours and a cinch job.

—Charles Almy, Jr., took the position as chemical engineer April 1 with Con American Vulcanized Fibre Co., Wilmington, Del.—R. F. Burnett writes that since graduation he has held the same position,—received two raises and has married in the meantime.—Dudley Clapp was recently elected secretary of the Philadelphia Technology Club. Since then, he has changed his address and expects to be in the vicinity of New York.—G. C. Conner of Cleveland, O. writes as follows:

Since graduation I have been in the engineering department of the National Elec. Lamp Association, Cleveland, O. I am at present working on industrial lighting problems after spending a year on research. We had some dinner with the Apron bunch when President Maclaurin was out here. That rubber gang is certainly a live one.

—Robert L. Dodge writes that he is

At work upon the plans of the future location of telephone exchanges in Philadelphia in 1930; for the work is planned twenty years ahead to ensure economy in conduit layout, and plans for the new Dorchester tunnel and the work has progressed so far that a contract for the first section will probably be let the first of May. Perhaps I had better make an official announcement, if it is not too late, that I am married. The happy occasion took place on January 24, 1911.

—H. N. Harrison has announced his engagement to Miss Marjorie M. Butler of New York.—A. L. Harding writes that he left the Telluride Power Co., on April first of this year to accept a position as superintendent of the McCook Electric Co., McCook, Nebraska.—Gorton James has announced his engagement to Miss Margery Allen of Marquette, Mich.—John Dodge, since the fall of 1910 has been working on the Gas Tunnel under the East River, in the engineering cost department.—P. G. Laurson is with the American Bridge Co., in New York City. At present he is in the designing and estimating departments.—R. A. D. Preston writes:

I am with the Goodyear Tire & Rubber Co., as assistant and factory manager and have charge of the experimental work in aeronautics and several other factory propositions.

—C. H. Shaw writes:

I have been developing a system of individual electric lighting for stitching machines used in shoe factories, clothing, underwear, gloves, sporting goods and other industries. This work has been carried on by the English department of the National Electric Lamp Association by whom I am employed.

—C. C. Webb left the middle of April for Alaska.—E. O. Christiansen was married to Miss Sigrid C. Pederson in Eureka, Cal., on April 4, 1921. Christiansen is in the employ of the Government hydrographic service.—Everett M. Follansbee has announced his engagement to Miss Laura Francis Todd of Rowley, Mass.—Austin B. Masson writes that he is

Chief of a party locating a division of a railway line some fifty miles into the Sierra Nevadas and a proposed power plant site on Big Creek.

—Walter T. Spalding writes:

HONOLULU, T. H.

Just a year ago I left the Terminal engineer's department of the Lackawanna R. R. in Hoboken, N. J., and came west to join my father in forming the Spalding Construction Co., in Portland, Ore.

We secured the general contracts for two brick, steel and concrete buildings about a month later. These are about completed now. I spent nine months as superintendent on this construction and worked 16 hours a day and Sundays.

I left this work to come here to handle some contracts we were recently awarded.

I plan to stay here in charge of this branch of the business while my father handles our coast work. Our present contracts here are with the U. S. Navy for four reinforced concrete barracks and officers quarters buildings at the new Pearl Harbor Naval Base near this city. I have a year's work in these contracts.

—Helen L. Fales writes:

Am still a chemist in the hospital of the Rockefeller Institute doing work in physical chemistry. My work at present is on cases of infantilism.

—D. A. French is located with Stone & Webster in Keokuk, Iowa, working on the Kiess River power project. The power house is to be a third of a mile long and have 30-10,000 horsepower units—horizontal turbines, together with the dam across the river, it will be the longest continuous concrete structure in the world.—A. B. Henderson writes:

During the past year I have been in the employ of the Boston Transit Commission, and my work has been confined for the greater part of the time to the main office at 15 Beacon St., it has consisted of drawing up studies.

W. F. Wells spent his first season after graduation in North Dakota, but for the past year has been at the Washington, D. C., Filtration Plant, as chemist and bacteriologist. He writes that the bunch there succeed in getting together for a Tech dinner occasionally.—H. F. Salmonde the genial assistant in the biological department left the 'Stute along with the 1910 crowd and after a year in Chicago is back east again, and since Nov., 1911, has been with the Springfield, Mass., Water Department, at their West Parish Filters. He holds the position of chemist and succeeds Harrub '09.—F. N. Scales is now with the Bureau of Plant Industry, of the U. S. Department of Agriculture. He is at present engaged in investigations on soil bacteriology at the Washington laboratories, but expects to go South on field work later in the season. His present address is 1477 Newton St., Washington, D. C.

Following the lead of Harold R. Perry who issued a "Flow Sheet" in Dec., 1910, we adopted the plan in order that each man in the mining course of 1910 might know what his class mates were doing nearly two years after graduation.

Our circular letter issued Feb. 7, has been answered by a large majority of the fellows and abstracts of their letters follow:—Anderson R. E., Hotel Anderson, Broadway, Cincinnati, Ohio. "Have not been so lucky? as you fellows as to get right into mining work. Have been in the hotel business for most of the past year, where I find enough to do to keep me busy. Am getting no experience, sorry to say, in milling and classifying ores, but say after a fellow gets a few bad checks passed on him he acquires considerable knowledge in classifying humans."—Bartlett R. L., Lehigh University. "Bart" is in charge of the Ore Dressing Dept. at Lehigh. He was glad to hear that we were getting out another "Dope Sheet."—Briggs C. J., Minas Tecoloks y Anexas Santa

Barbara, Chihuahua, Mexico. "Chet" came North to get married and we understand took Mrs. Briggs back with him. Greetings.—Burnett R. F., Chisholm, Minnesota. Burnett is still with the same company and says that he expects to remain with them the rest of his natural days. He has been married now for ten months and extends a most hearty invitation to all the boys that may pass in his vicinity to spend a night or take a meal with him.—Crichton, H. Y., 114 W. 6th Street, Leadville, Colorado. "Dutchy says that he is much like the rest of us, in failing to make his splash in mining. He says "I've been millman, assayer, pumpman mucker, mining promoter, miner, and man of leisure (sometimes called loafer)—lots of experience but no money."

Dutch says that Leadville is dead, beer five cents a throw and "booze" a "bit." He adds that he feels like an angel and is looking daily for the wings? He now owns a Molybdenite property and promises to let us all in on the ground floor when he floats the company. Here's luck to it, Dutch.—Everett W. D., Hazleton, B. C. "Skeet" writes from Park City that he is leaving directly for Hazelton to develop a prospect as assisting partner. He says that he has enjoyed himself and gained a lot of experience and hopes that all the boys have been as fortunate.—Goodspeed G. E., Institute. Eddie has been so busy that he has failed to write. We might add more but charity forbids.—Goodwin R. F., care of Braden Copper Co., Rancagua, Chile. Dick was last heard from as per the above address. "Ante Up" Dick and luck to you.—Hargraves W. B., Box S, Porcupine, Ontario. Perry wrote in his flow sheet Dec. 1910, "I thought Porcupine had something for me. I haven't found it yet, if there is. I joined the benedicts September last. Have enjoyed the letters from you fellows very much. Get together now and write each other."—Hopkins, P. S., Box 330, Porcupine, Ontario. "I am working on my second million, failing to make the first I gave it up and started on the second? Am as busy as the proverbial cat on the tin roof, trying to beat the Rand output with a "Wild Cat."—Hurley F. A., 612 B St., Sparrows Point, Md. Fred is still with the Md. Steel Co. He is now busy trying to make briquetts out of a fine limonite ore and flue dust. He seeks consolation in old Heidelberg, and by the tone of his letter we think he has a very kind regard for all the "rough necks." He extends a most urgent invitation to all fellows to visit him who get within striking distance of Sparrows Point.—Jones R. L., care of Sulphur Mining & Ry. Co., Mineral, Va. Ray is with a 500 ton mill concentrating a mixed pyrite and phyrrotite ore by means of jigs and Wilfleys. While changing jobs R. L. spent a couple of weeks in Boston and N. Y. compiling statistics. He will be pleased to submit reports of his findings to all the men wishing to separate from large bank rolls in the midst of the Big Town. Wohlge please take note and apply before the issue is out.) Needless to say it is of vital interest to all devotees of "the Books"—Perry

H. R., Institute. We regret to be obliged to report that our old playmate Perry fired a man out of the laboratory for smoking.—We refer to the Perry-Guthrie incident—no personal liability. Ray Jones says he “nearly bust” laughing when he learned of it. Greetings Perry but we had to put something over for wishing that the “second flow sheet would not prove a Wild Cat success but a real Boom.”—Piper C. F., Randolph, Mass. Piper has been busy fitting up a laboratory for the United Shoe Machinery Co., in Brockton and is now figuring on a concrete contract on the new Tech buildings.—Schleicher H. M., Huff Electrostatic Co., 60 India St., Boston. He says that he is still “very much with the above company.” He is making good and sticking, and wishes to be remembered to all the fellows.—Schofield, W. N. Shawnee Coal and Coke Co., Eckman, W. Virginia. Bill is in charge of all the engineering work for the president of the company and this includes four plants. He regrets that the flow sheet is published on paper that recalls old exam. papers to his mind.—Wadsworth P. K., Herringbone Metal Lath Co., Los Angeles, Cal. Wadsworth is salesman for the above company. He has been constructing county roads near Seattle. He likes the west and invites all the fellows to look him up if they get out in his section.—Wohlgemuth B. S., care of Y.M.C.A., Wheeling, W. Virginia. Bert is foreman of a blast furnace turning out 225 tons of pig per 24 hrs.—Bessemer. He has a gang of men under him, he likes it all but the night shift, we are surprised to learn the fact as Wohlge always did shine in the night work, in fact if our memory holds his zeal extended over into Sunday at one time, result a free ride, lodging and a Mr. John Smith in the “Dock.” Our playmate is looking forward to the 1914 reunion as are all the rest of us. Wohlge is in line for congratulations, so step forward, gentlemen. How are the “Books”?

1911.

ORVILLE B. DENISON, *Sec.*, 152 West Street, Worcester, Mass.

At last the class of nineteen hundred and eleven has been relieved of the title of “alumni baby,” for on Tuesday afternoon, the fourth of June the class of nineteen-twelve, led by “Medicine-Man” Kebbon and Davie Benbow, left the portals of the Institute to seek fame and fortune in this busy world into which *we* were so recently launched. Nineteen-twelve graduated a slightly larger class than we did, but I’ll wager that our own little class of 1911 will never allow 1912 to get any distance ahead of them in alumni loyalty and spirit.

At the present time, however, the class seems to have settled into a rather uninspired rut, which manifests itself particularly in the fact that the secretary has received but a very limited number

of letters from members lately. What's the matter, fellows, isn't the world using you right? The secretary will be more than glad to hear from you, even if your letter is entirely a "gloom" message. But better still, write of your successes. One thing is pleasing—the marriage announcements seem to be following each other in pretty rapid succession. That can certainly be taken as a sign of prosperity!

Don't be a Wasser, be an Isser! Obey that Impulse and write!

I. Our Matrimonial Column.

EDITOR'S NOTE, This is not intended to be an advice column, such as is prevalent in the sensational press of the day, but is rather a record of action and accomplishments in the field of conjugal bliss.

News of "Herb" Fryer's marriage, was received just in time to arrange for a "tag" on the last set of 1911 notes, so that a complete verification of the affair is now in order. "Groucho" was married on Wednesday, the thirteenth of March (No, gentle reader, it wasn't Friday, the thirteenth) to Miss Ethel Irene Hoffer at Topsfield, Mass. They are now "at home" to all their friends at 1877 Hyde Park Avenue, Readville, Mass.—On the eighth of April, Paul Kellogg, another well-known member of the class, was married to Miss Dorothy Fayette Loomis of Cleveland, Ohio. The ceremony was performed in Cleveland.—A little later in the month, to be exact, on the twentieth, Harold Robinson was married to Miss Frances Spaulding at Winchester, Mass. Another Wellesley—Technology alliance!—"Dick" Gould, fresh from his studies in Germany, picked out, probably with the advice and consent of the present Mrs. Gould, May as his wedding-month. The joyous chimes rang out from Grace Episcopal Church in Newton on the evening of May twenty-second, as Richard Hartshorn Gould and Miss Anna Katherine Spencer of Newton were married.—Along with the invitation to Dick's wedding, came the announcement from Joseph N. French, a Course IV man, of his marriage with Miss Annie Gertrude Lathe of Boston, on the fourteenth of May. After a short honeymoon trip around the United States, Mr. and Mrs. French sail for the other side in August, where they will spend about two years.—"Art" Pillsbury, one of "Pa" Allen's charges, or more specifically a civil engineer, beat it for California immediately upon graduating and started to work for D. J. Halliday, a consulting engineer. His trip was not in vain, apparently, for he ushered in the month of June by marrying Miss Estelle Merchant at Long Beach, California.—And last but not least, gentlemen, we have that self-confessed woman-hater, the man who was always known to blush (not) when a pretty girl appeared, our own "Bill" Salisbury, a benedict! True, true. For by the time this story is in type, and spread broadcast over the world, Bill will have taken the final plunge.—Wednesday the nineteenth of June was the date of the marriage of Mr. William Conyne Salisbury to

Miss Dorothy Drummond Scott of Chicago, in St. Peter's Episcopal Church in the Windy City.

—Just as these notes were being sent along, the secretary received an announcement of the wedding of James K. Campbell to Miss Jessica Cabot Babcock in New York City. Congratulations, Jim. The news came just in time.

II. *The Home Circle*

EDITOR'S NOTE. Correspondence is urgently requested from members of the "circle"—meaning the class of 1911—and said letters will be published for the benefit of all in these columns. Come on, boys, grab up that pen and write! Get the habit!

The most important event for the secretary to chronicle at the present time is the annual Tech night at the Pops; and strangely that is one of the things upon which the secretary is not qualified to write at this time. Sudden illness—speaking personally for a moment—kept me away from the Pops, much to my disappointment. The illness proved rather serious, too, for the doctor says I just dodged a bad case of pneumonia and I have been, and at this writing still am, in bed. I am writing these class notes propped up in a chair, banging away at a typewriter.

Well, from all I hear, the Pops were a great success and there were quite a number of 1911 fellows present, renewing old times. Several of the fellows were present with their better halves, notably Fryer and Robinson. Charlie Barker came home sober—but then it's quite a ride from Boston to Worcester, and you could get quite a hold on yourself in that time! There were a number of special features introduced by the committee in charge, including the usual ceremonies of giving the graduating class its banner, innumerable cheers and the introduction of a large float representing the new Technology. Also the men present were asked by means of a stereopticon and slides, whether or not they had contributed to the Alumni Fund yet. All in all, it was *some* evening. Incidentally, a bunch of 1911 men, headed by Vose and Seligman, enlivened the festivities by throwing vari-colored streamers and confetti from the balconies when the Technology float was brought in.—The secretary has received several invitations to be present at various class reunions, but has been forced to decline them. The work of a secretary of one of the younger classes is certainly interesting, and the coöperation received from the older men is alike a great help and an inspiration. Tech alumni leaders are certainly leaders in every sense of the word!—One of the liveliest bits of class spirit which has reached the secretary yet, is the set of "Memoirs of the 1911 Miners," compiled in typewritten form by "Aurora Borealis" Grossmann. Limited space will allow only a partial review of the memoirs here, although they are remarkably interesting.—Frank Curtis is working as metallurgical chemist in

the assay office of the Copper Queen Reduction Works at Douglas, Arizona.—Rudolph Emmel has been travelling around quite a bit, starting in the southeastern portion of Alaska. He finally returned to Boston, and the day after Thanksgiving went down to Fairmount, West Virginia with the Consolidation Coal Company. He has left there, however, and is now mining in Ludwig, Nevada.—“Jimmy” Greenan is with the Nevada Hills Mining Company in Fairview, Nevada.—“Tom” Killion was in Butte, Montana, and also further west for a while, but is back east now.—J. D. MacKenzie has been taking a Ph.D. course at Cornell University.—Franklin Osborn, 2nd, is in Ludwig, Nevada with the Nevada Douglas Copper Company; while “Fat” Perry is with the American Smelting and Refining Company in Monterey, Mexico.—Frank Smith is in Torrington, Conn., in a research lab., while Noyes Weltmer is at the Garfield Smelter, fifteen miles from Salt Lake City.—Grossmann reports—rumor only, so he says—that Cowee and Whorf have left the ranks of the bachelors. No authentic information has been received by the secretary.—The secretary was privileged recently to read a letter written by A. C. Metz, who was once designated as the “big smoke” of the class, to E. M. Young. Metz has been down in Valardeno, Mexico, since graduation. His letter read exactly like a novel, for he has been under the fire of the bandits and expected at one time to be killed outright. Only the intervention of some troops in a special train saved the lives of the little colony. Young prizes the letter highly.—Received a letter from Walter Allen lately in which he told of the whereabouts of the Course XIII men. Walter himself is with the Electric Boat Company in Groton, Conn., Herreschoff is running his father’s yacht yard at Bristol, R. I., Schafer, Cornell and Roberts are with the New York Shipbuilding Company in Camden, N. J., Cooke is in the Navy Yard at Philadelphia; and Adams is in the Navy Yard at Washington, D. C.—Augustus Frigon, a member of Course VI during the junior and senior years, is now a professor in the electrical department of the École Polytechnique in Montreal, Canada. He hopes that all 1911 men who are in or near Montreal will look him up.—A letter from M. R. Thompson indicates that he is enjoying life and working hard in the hills of West Virginia. He says that if any man wants any information regarding that section of the country, he will gladly give it.—G. A. Brown, who had to postpone the receiving of his degree until this year on account of illness during his senior year, is now at work for the W. H. McElwain Shoe Company in Manchester, N. H., as chemist.—A letter from “Pete” Gaillard shows that life on the Isthmus of Panama apparently agrees with him. He says he is now working on installation of towing track for the electric towing locomotives, and will later go on machinery installation. Pete says: “Very interesting work, but nine hours is a long day on a ‘tropicannibal isle.’”—“Art” Leary has returned from the Pacific

coast and is now at home in East Boston. He is going with the Highway Commission soon.—“Mike” Greenleaf writes from Cleveland that he and Don are the life of that hustling city.—George Forristall is now manager of the classified advertising department of the New York *Times*, a position of considerable responsibility. Congratulations, George! You always were a hustler!

—A recent clipping from the Boston *Transcript* reveals the fact that one of our classmates, Stacy C. Bates received a degree of A. B. with this year’s work at the University of Illinois. Degrees were conferred on 650 students by that institution this year.—“Scotty” Kimball is growing fat out in Paynes Creek, California. Of course you know where Payne’s Creek is—why, yes, that’s where they make Payne’s Celery Compound, is it not? Yes, I guess not! At any rate, Scotty is out there with the Northern California Power Company. He admits himself, that the hamlet is 35 miles from nowhere.—Our old friend, “Heine” Stucklen made a pretty good showing in the annual state championship golf tournament at Woodland this year. He played his way through a large field up to the semi-finals, and at that it took the winner of the tournament, Heinrich Schmidt of Worcester, to beat him out. Schmidt and Ouimet met in the finals, and the Worcester boy won by one up.—“Johnny” Bigelow didn’t stay very long in Cuba, where he went to look after some of his father’s interests, claiming that the island was too warm for his health and his morals.—W. C. Davis, Jr., who was with us in the senior year in the civil engineering department, has located in São Paulo, Brazil where he is with Mr. S. F. Shaw, chief engineer of the Brazil Railway Company.—“Doc” Davis, of Tech Show fame, received the army appointment he tried for, and is now a second lieutenant in the C. A. C. at Fort Monroe, Virginia.

—Another late bit of news received by the secretary is that Percy Rideout has left his railroad job in the West, and is now in the Public Roads Office of the United States Department of Agriculture in Washington, D. C. Percy says: “A year ago at this time we all felt our wings sprouting. Wonder how many can fly now?”

SCOTT BRADSTREET PUTNAM

Word was received by the secretary, too late for publication in the last quarterly number of the REVIEW, of the sudden death of Scott Putnam in El Paso, Texas, on the eleventh of April. Death followed an operation for appendicitis. Since graduation he had been in Parral, Mexico, looking out for his father’s mining interests there.

By his death the class of 1911 loses a sterling member, one who made many, many friends during his Institute career and whose quiet, straight-forward manner was always noticeable. He was

just entering his twenty-fifth year, having been born in Beverly, Mass., April 7, 1888.

III. 1911 and the Alumni Fund

At the present writing the work of 1911 along the lines of the Alumni fund has been really encouraging. The men have been responding very well, and most of the men have given amounts slightly in excess of the class allotment—namely ten dollars. At the end of two months the fund amounted to \$350, 993.20 from 1450 men. Of this amount, the class of 1911 contributed \$2350.00 from 98 men. The class average is therefore approximately \$23, a good figure. Subscriptions have been received, however, from but 15.4 per cent. of the men, and this is what must be remedied. After consulting with members of the central committee, the secretary has decided to postpone the systematic campaign which he has tried to map out, until the fall, when the men will be able to think a little better just what they can do. Think it over during the summer, fellows, for in the fall the 1911 committee will be after you with hammers. Nuf ced!

IV. Address Changes of Members

Walter D. Allen, care of Electric Boat Company, Groton, Conn.—Donald C. Bakewell, Duquesne Steel Foundry, Coraopolis, Pa.—Kester Barr, 111 North Canal Street, Chicago, Ill.—David E. Bartlett, 87 Milk Street, Room 42, Boston.—Lewis L. Baxter, care of Hedden Construction Company, Metropolitan Bldg., New York City.—Samuel I. Blum, 33 Kingsbury street, Boston.—Caleb S. Bragg, 945 Marion Avenue, Cincinnati, Ohio.—George A. Brown, Y. M. C. A., Box 7, Manchester, N. H.—P. E. Burnham, care of P. C. C. & St. L. Ry., Logansport, Ind.—O. V. Chamberlain, 227 Hamilton Avenue, Paterson, N. J.—Pelayo Chinchilla-Kirkpatrick, 56 Cold Spring Street, New Haven, Conn.—Ove Collett, Arendal Fossekonyssain, Arendal, Norway.—Paul A. Cushman, 855 Asylum Avenue, Hartford, Conn.—Lieut. Henry C. Davis, Jr., Fort Monroe, Va.—Wm. C. Davis, Jr., care of Brazil Railway Company, Sao Paulo, Brazil.—A. L. de Romana, 225 Seward Place, Schenectady, N. Y.—Frank C. Dolke, Lone Pine Poultry Farm, Valleyford, Wash.—Henry F. Dolliver, 21 Farewell street, Newport, R. I.—James F. Duffy, 22 Portland street, Worcester, Mass.—S. B. Dyer, Box 109, Cape Elizabeth, Me.—Gordon W. Elder, care of India Rubber Company, New Brunswick, N. J.—Rudolph Emmel, Ludwig, Nevada.—G. H. Estes, 18 Laurel street, Auburn, Me.—E. N. Fales, Lake Forest, Ill.—L. P. Ferris, care of American Tel. and Tel., 15 Dey street, New York City.—George B. Forristall, 308 West 97th street, New York City.—Herbert Fryer, 1877 Hyde Park Avenue, Readville, Mass.—Richard H.

Gould, 1206 Boylston street, Newton Upper Falls, Mass.—Julian S. Gravely, Wytheville, Va.—James O. Greenan, care of Nevada Hills Mining Company, Fairview, Nev.—M. A. Grossmann, 235 Custer Avenue, Youngstown, Ohio.—T. H. Haines, 516 Talbot Avenue, Boston.—Henry W. Hall, 408 Board of Education Building, St. Louis, Mo.—Harold M. Hallett, care of Unit Construction Company, St. Louis, Mo.—John P. Hart, Room 1110, Flood Bldg., San Francisco, Cal.—Isaac Hausman, care of Hay Foundry and Iron Works, Newark, N. J.—S. L. Hayes, 100 North 2d street, Millville, N. J.—Roy L. Hayward, 62 School street, Brockton, Mass.—A. N. Herman, 208 East 69th street, New York City.—Bancroft Hill, 712 Keyser Boulevard, Baltimore, Md.—W. K. Hodgman, Jr., P. O. Box 623, Taunton, Mass.—W. B. Hopkins, 1177 Fillmore street, Topeka, Kan.—Henry V. Hoysradt, 111 Crary Avenue, Mt. Vernon, N. Y.—Otis Hutchins, 264 Fourth street, Niagara Falls, N. Y.—I. S. James, care of Samuel James, Cia Metalurgica Nacional, Matehuala, S. L. P., Mexico.—Wesley T. Jones, Y. M. C. A., Temple street, New Haven, Conn.—C. P. Kerr, Catonsville, Md.—Scott P. Kimball, care of Northern California Power Company, Paynes Creek, Cal.—H. B. Knowles, 42 South Converse Hall, Burlington, Vt.—Arthur F. Leary, 55 Collins street, East Boston.—Harry A. Lewis, care of Shepley, Rutan and Coolidge, 122 Ames Bldg., Boston.—Raymond H. Lord, 2831 Warren Avenue, Chicago, Ill.—M. J. Lowenberg, 18 Fabyan street, Dorchester, Mass.—W. R. McCune, care of Otis Fenson Elevator Company, Hamilton, Ont., Can.—Roy G. McPherson, 1495 Baldwin street, Waterbury, Conn.—L. O. Mills, care of Besse-Rolfe Company, Lynn, Mass.—Simon Nath, care of Lowell Gas Works, Lowell, Mass.—C. L. Ofenstein, City Engineer's Office, Jacksonville, Fla.—W. J. Pead, Jr., 74 Marshall street, North Adams, Mass.—Theodorus Polhemus, 188 Evanson street, Winnipeg, Man.—Harold B. Pushee, 261 Dixon Place, Akron, Ohio.—S. M. Ratzkoff, U. S. M. A., West Point, N. Y.—Clayton S. Robinson, Auto Supplies, Canal street, Worcester, Mass.—Harold L. Robinson, 17 Winthrop street, Winchester, Mass.—Foster Russell, 2702 East 8th Avenue, Spokane, Wash.—S. M. Schmidt, 396 Northampton street, Boston.—O. R. Schurig, Y. M. C. A., Pawtucket, R. I.—John H. Scoville, 96 Wethersfield Avenue, Hartford, Conn.—E. O. Scriven, 215 West 23rd street, New York City.—Frank G. Smith, 205 Woodlawn Terrace, Waterbury, Conn.—Lester A. Stover, 354 West 51st street, New York City.—W. A. Van Syckel, 326 North 10th street, Lebanon, Pa.—Lawrence B. Weeks, 1616 Twenty-first street, Washington, D. C.—Thorne & Wheeler, care of Edible Products Company, 165 East 22nd street, Bayonne, N. J.—William R. Wheeler, care of Ingersoll-Sergeant Drill Company, 65 Oliver street, Boston.—Emmons J. Whitcomb, 358 Broadway, Winter Hill, Mass.—W. O. Whitney, 95 Bayard street, New Brunswick, N. J.—John C. Woodruff, care of Edible

Products Company, 160 East 22nd street, Bayonne, N. J.—E. M. Young, 11 Warren street, Haverhill, Mass.—Percy A. Rideout, Public Roads Office, Dept. of Agriculture, Washington, D. C.

1912.

RANDALL CREMER, *Sec.*, 112 C Street, S. E. Washington, D. C.

In reply to the many questions which have been asked regarding the Alumni Association, it is hoped that the following information will be helpful. All graduates of the Institute are regular members. Any non-graduate member of a class which has been graduated may become a member on election by the executive committee. Applications for membership may be had by sending for them. The dues for membership are two dollars per year. These dues should be sent to Walter Humphreys, secretary and treasurer. In filling out the application blanks, it will not be necessary to get endorsers. As to the class dues, all notices of dues and other literature will be sent to each member of the class when necessary. Be sure that the secretary has your correct address in his card catalogue. He will be glad to receive letters from the fellows, and will gladly give any information regarding other members in the class when it is possible. The July issue of the TECHNOLOGY REVIEW will be sent to all members of the class, but hereafter only to those who have paid their two-dollar dues to the Alumni Association.